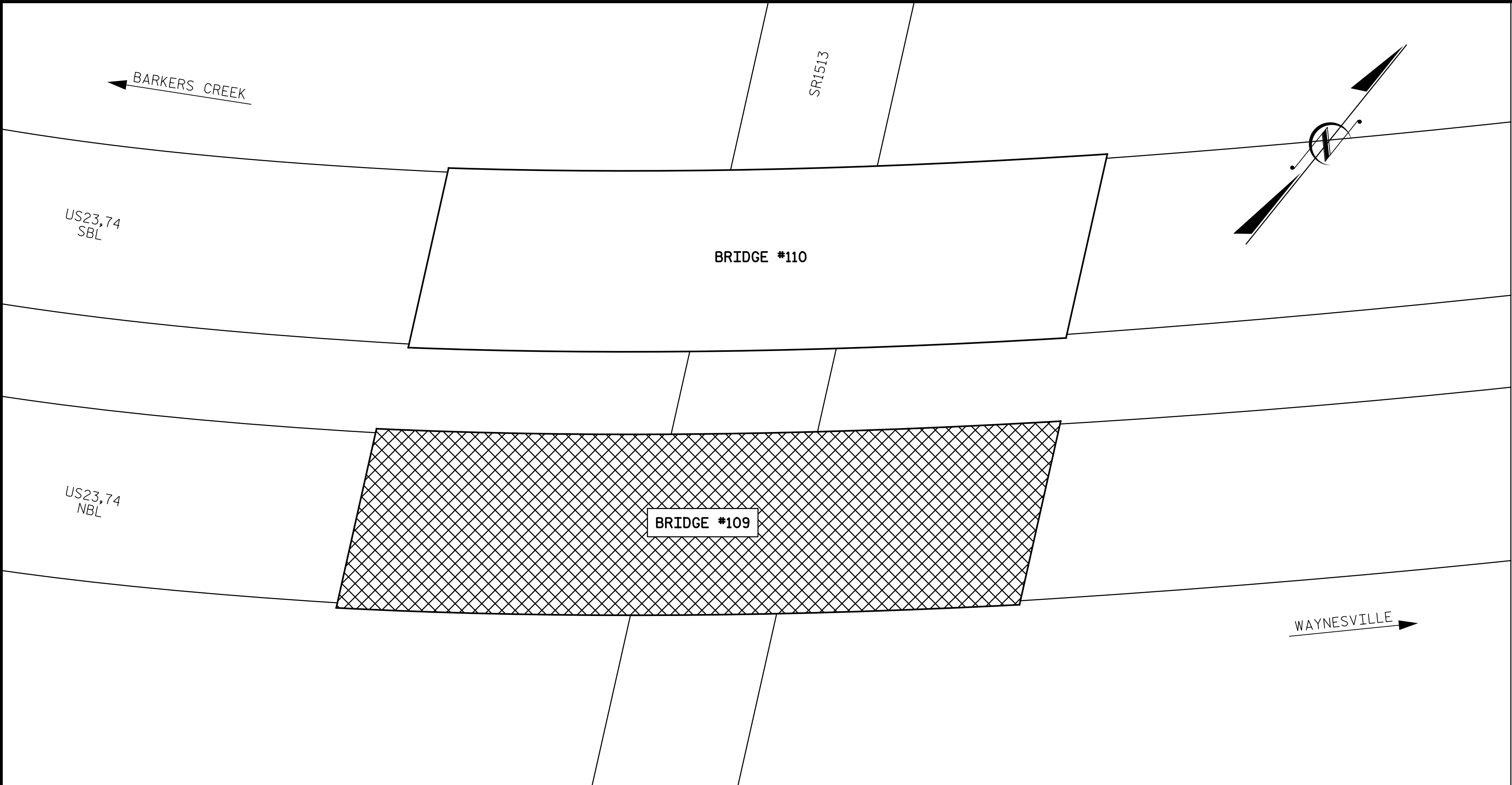


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LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO-DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.

THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF OF HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

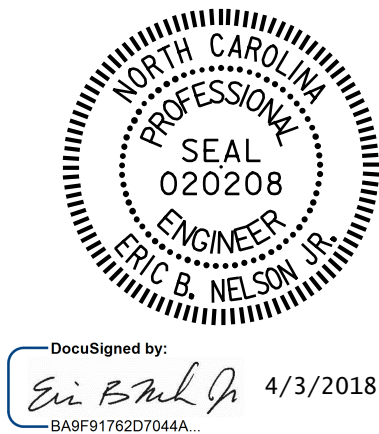
FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

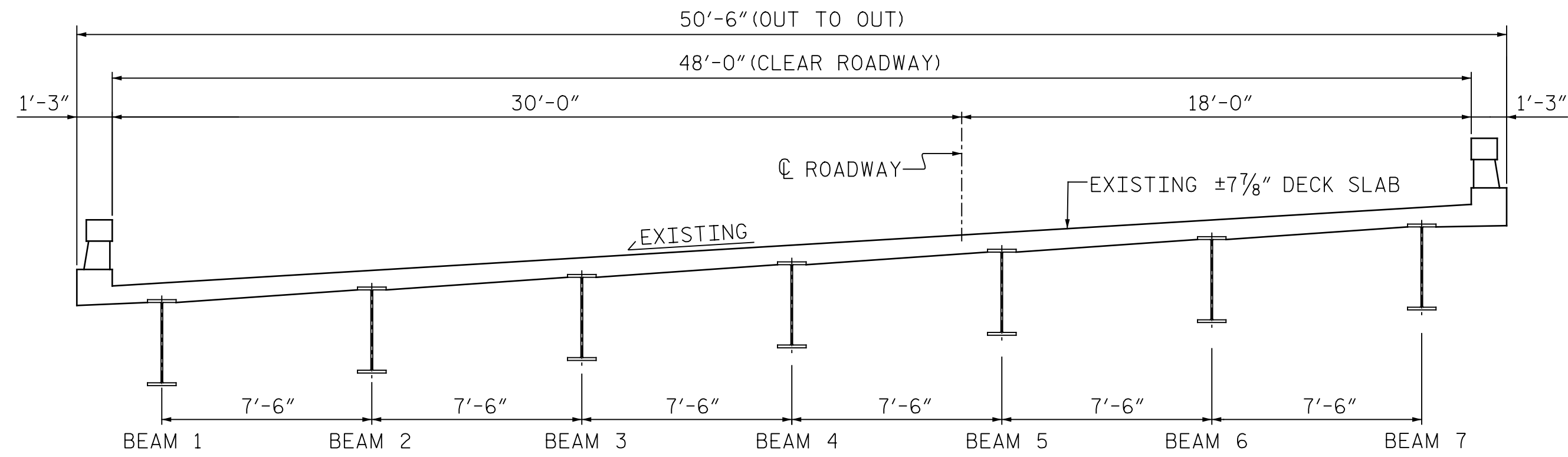
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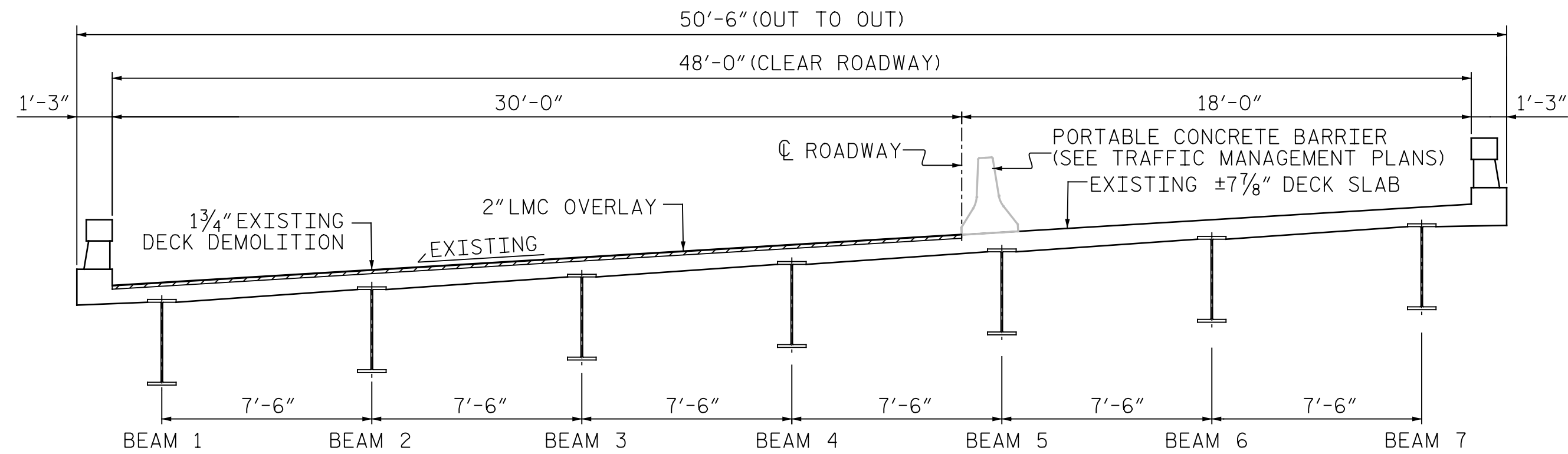
PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110

SHEET 2 OF 2

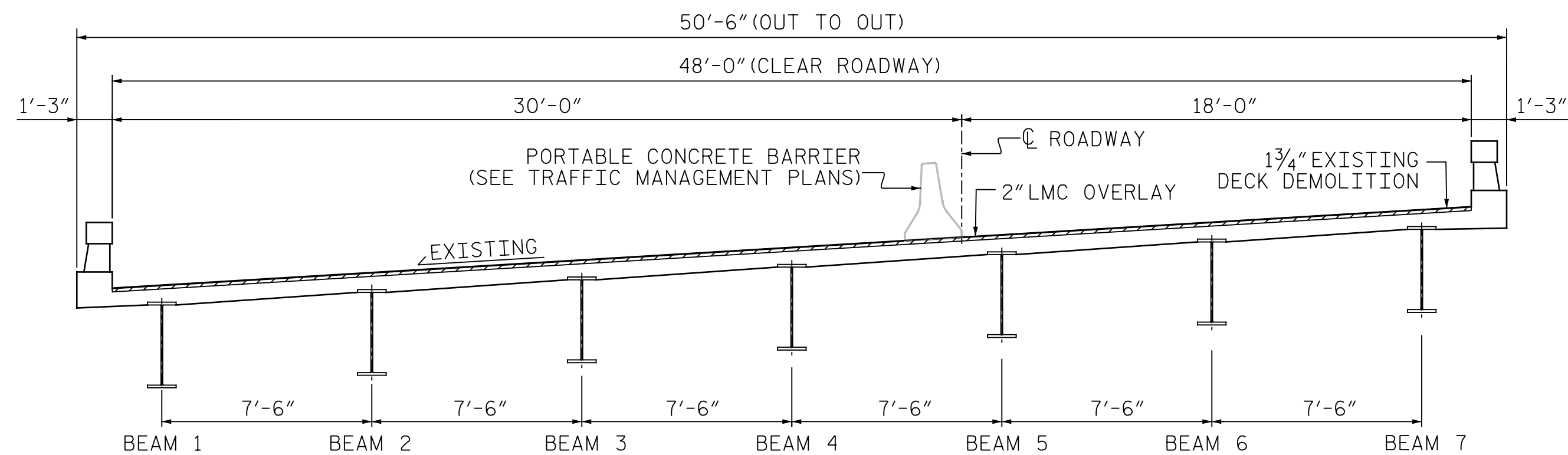
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						REVISIONS			SHEET NO.	
GENERAL DRAWING						NO.	BY:	DATE:	NO.	BY:
						1			3	
						2			4	
										TOTAL SHEETS
										142



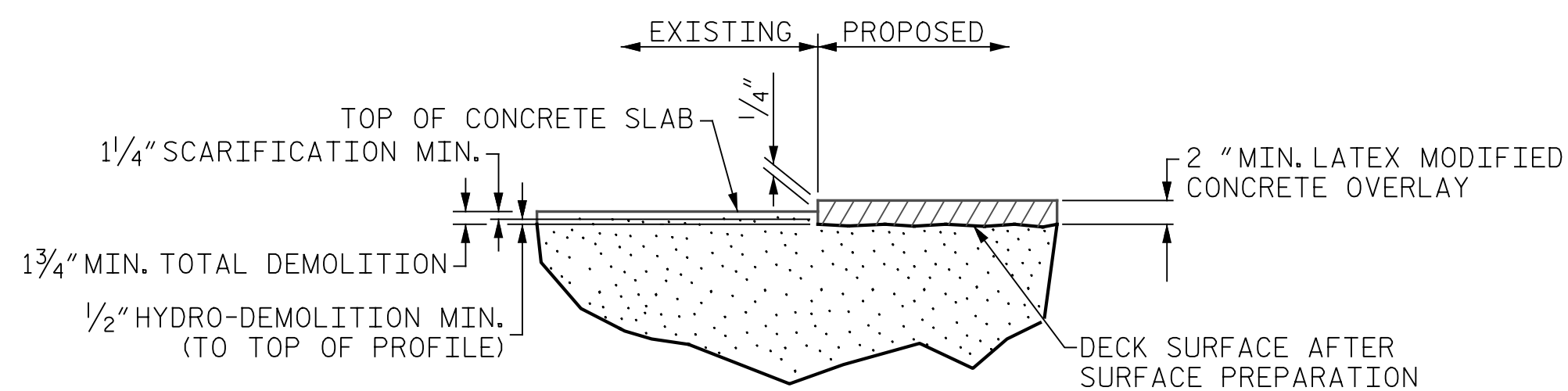
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED LEFT LANE)



TYPICAL SECTION
(PROPOSED RIGHT LANE)

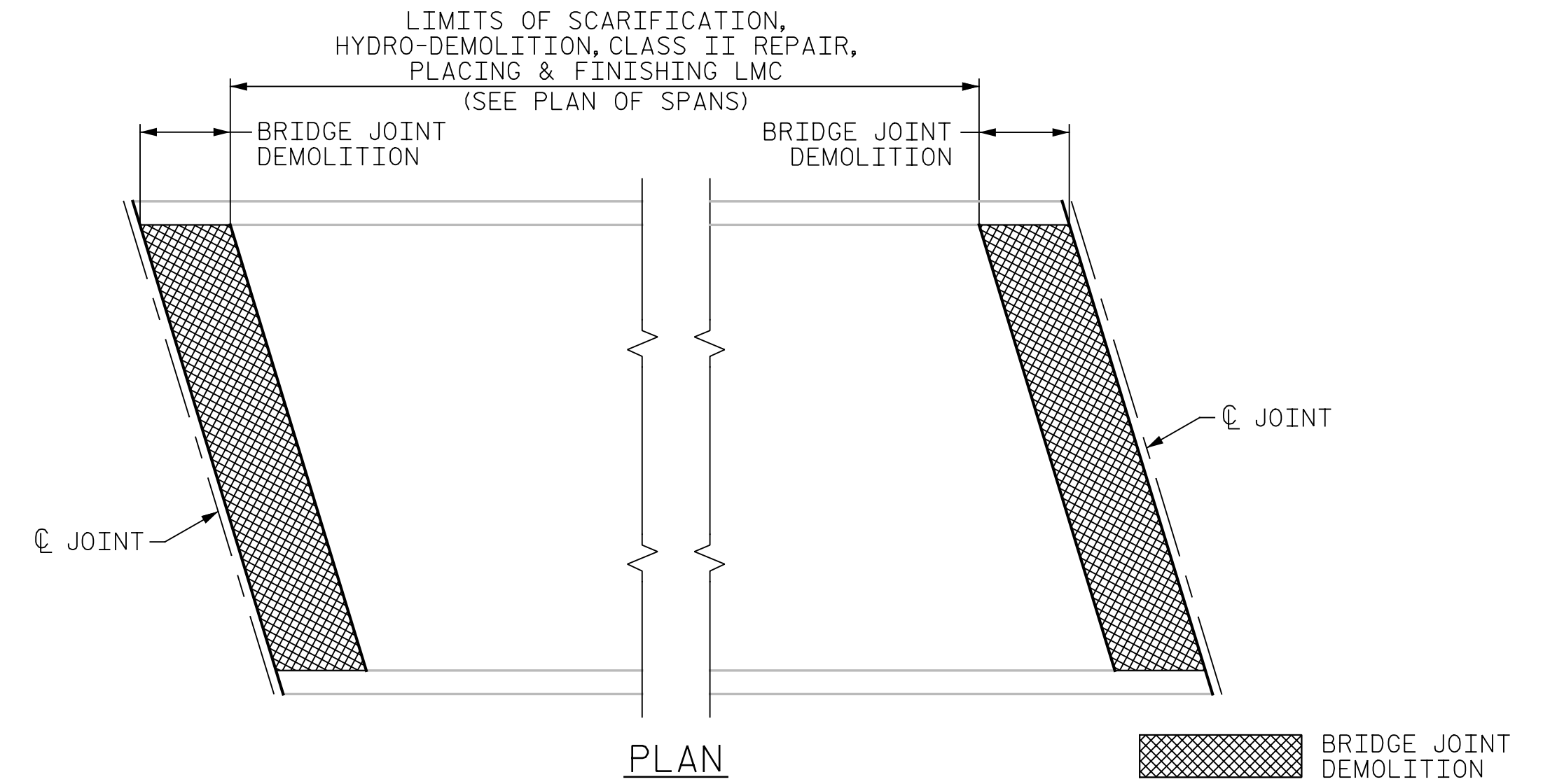


DETAIL FOR LATEX
MODIFIED CONCRETE OVERLAY

NOTE:

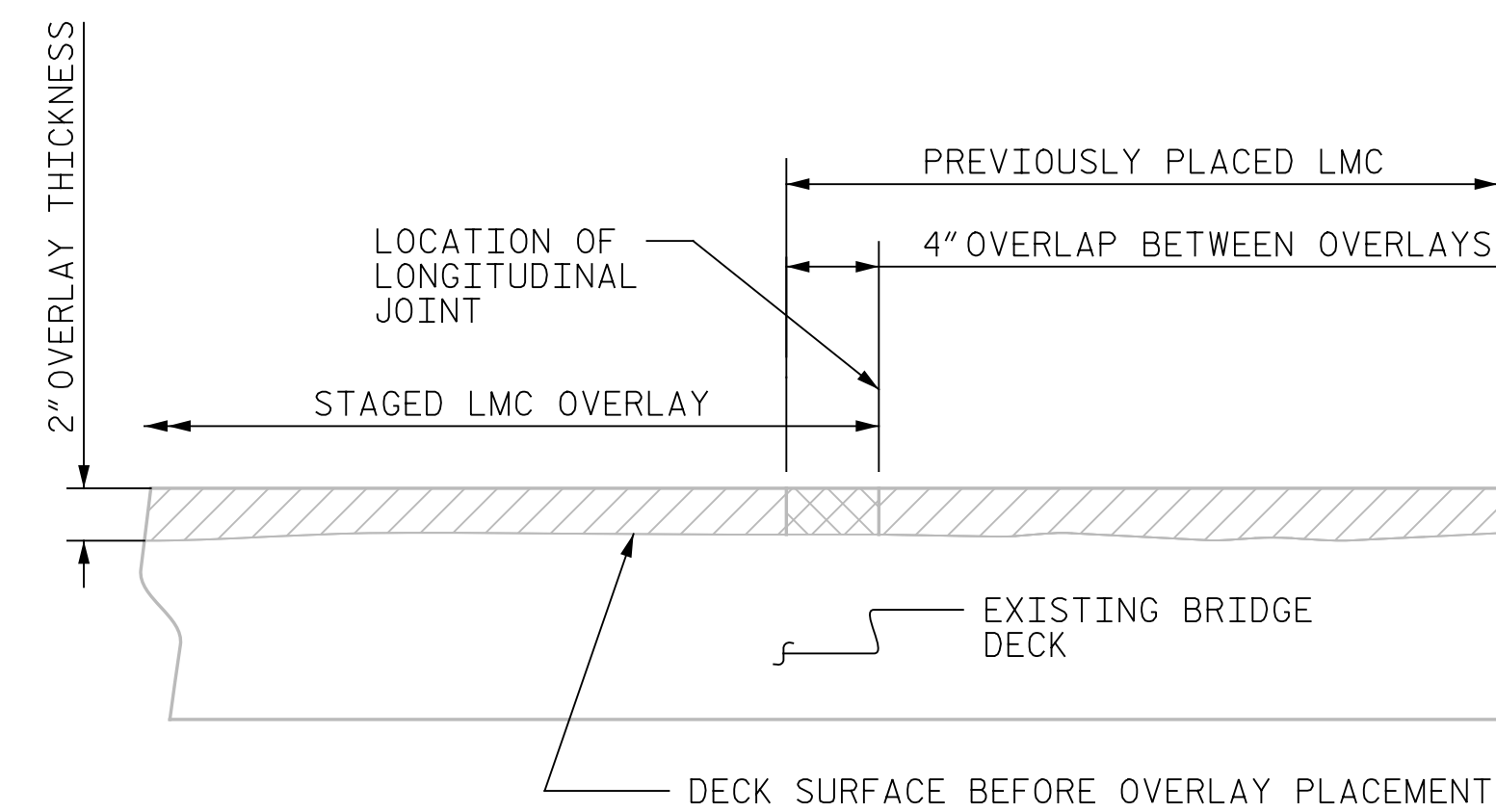
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.



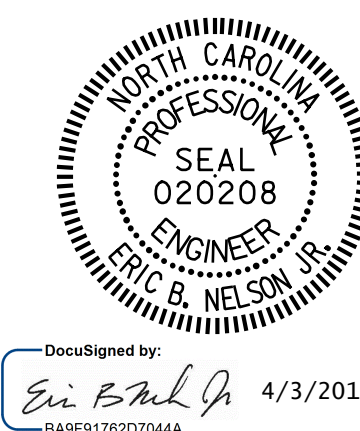
ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



STAGED LMC OVERLAY
CONSTRUCTION JOINT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
&
OVERLAY DETAILS

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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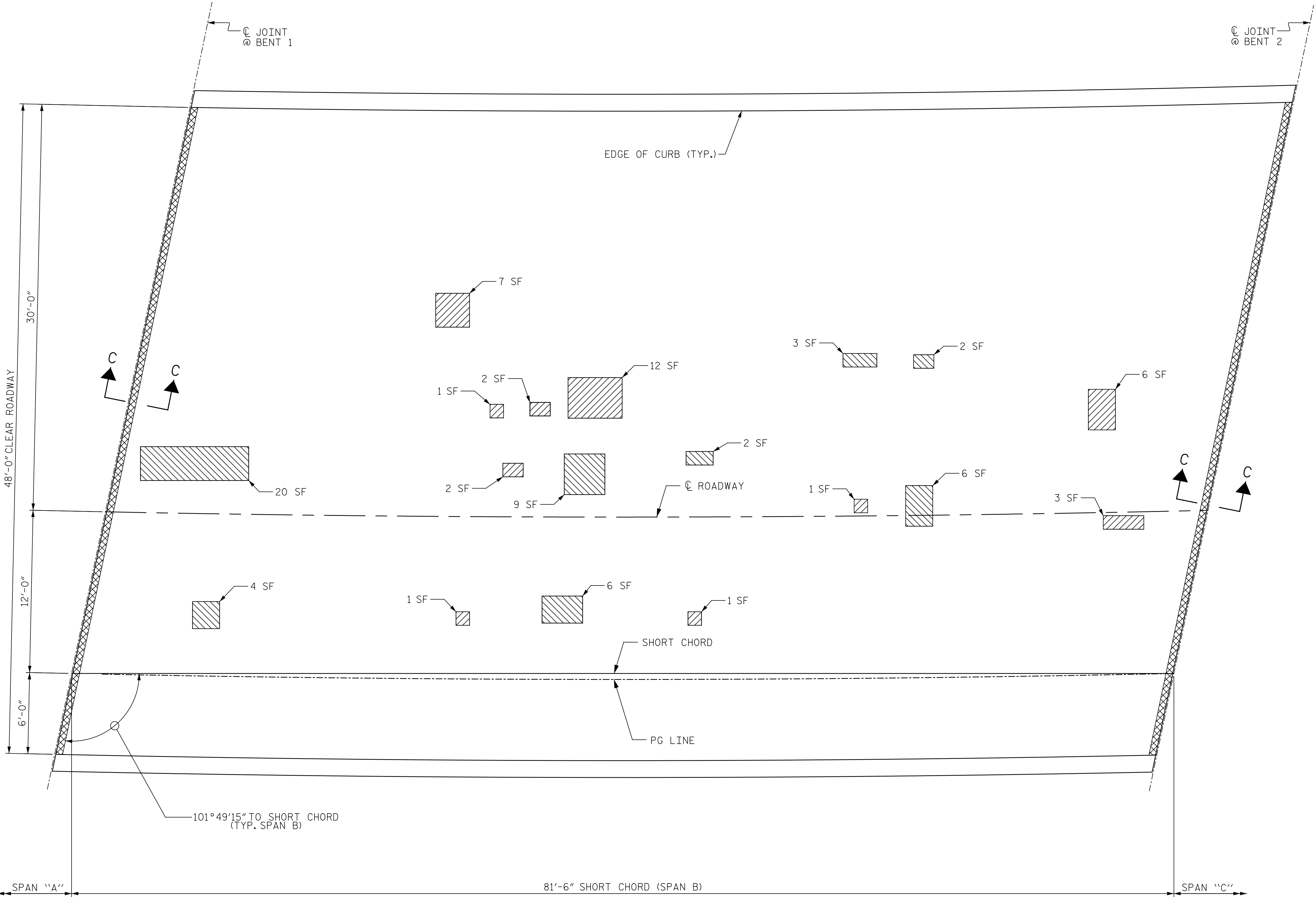
REVISIONS						SHEET NO. S-109
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	435 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	435 SY	
CLASS II SURFACE PREPARATION	9.8 SY	
BRIDGE JOINT DEMOLITION	49 SF	
GROOVING BRIDGE DECK	3608 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "B"

(SEE SHEET NO. S-113 FOR SECTION C-C)

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "B"					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-111					TOTAL SHEETS 142

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

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(919) 420-7660
NC Lic. No. F-0270

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SUMMARY OF QUANTITIES FOR SPAN 'C'		
	ESTIMATE	ACTUAL
* SCARIFYING BRIDGE DECK	194 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	182 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	65.8 SF	
GROOVING BRIDGE DECK	1470 SF	

* INCLUDES CONCRETE HEADER LOCATION

NOTES:

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- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD SCOPING INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

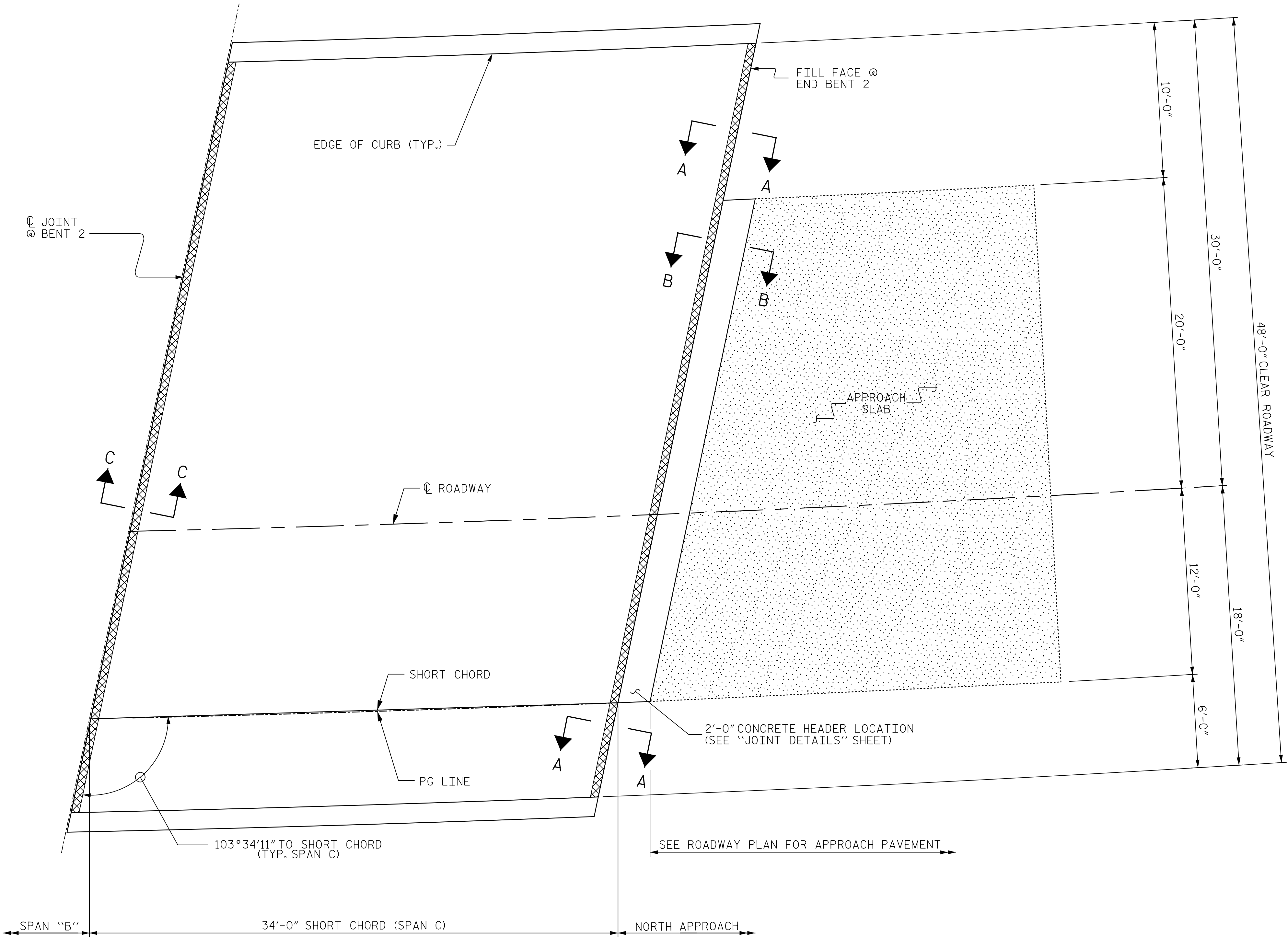
SURFACE PREPARATION
SPAN 'C'

REVISIONS						SHEET NO. S-112
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

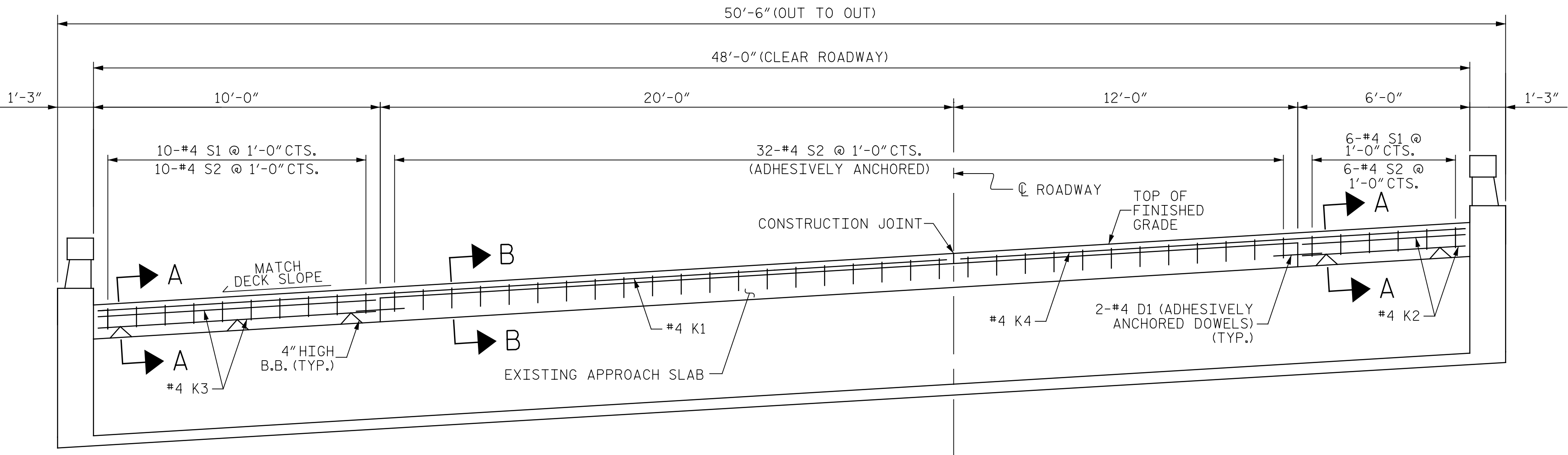
DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
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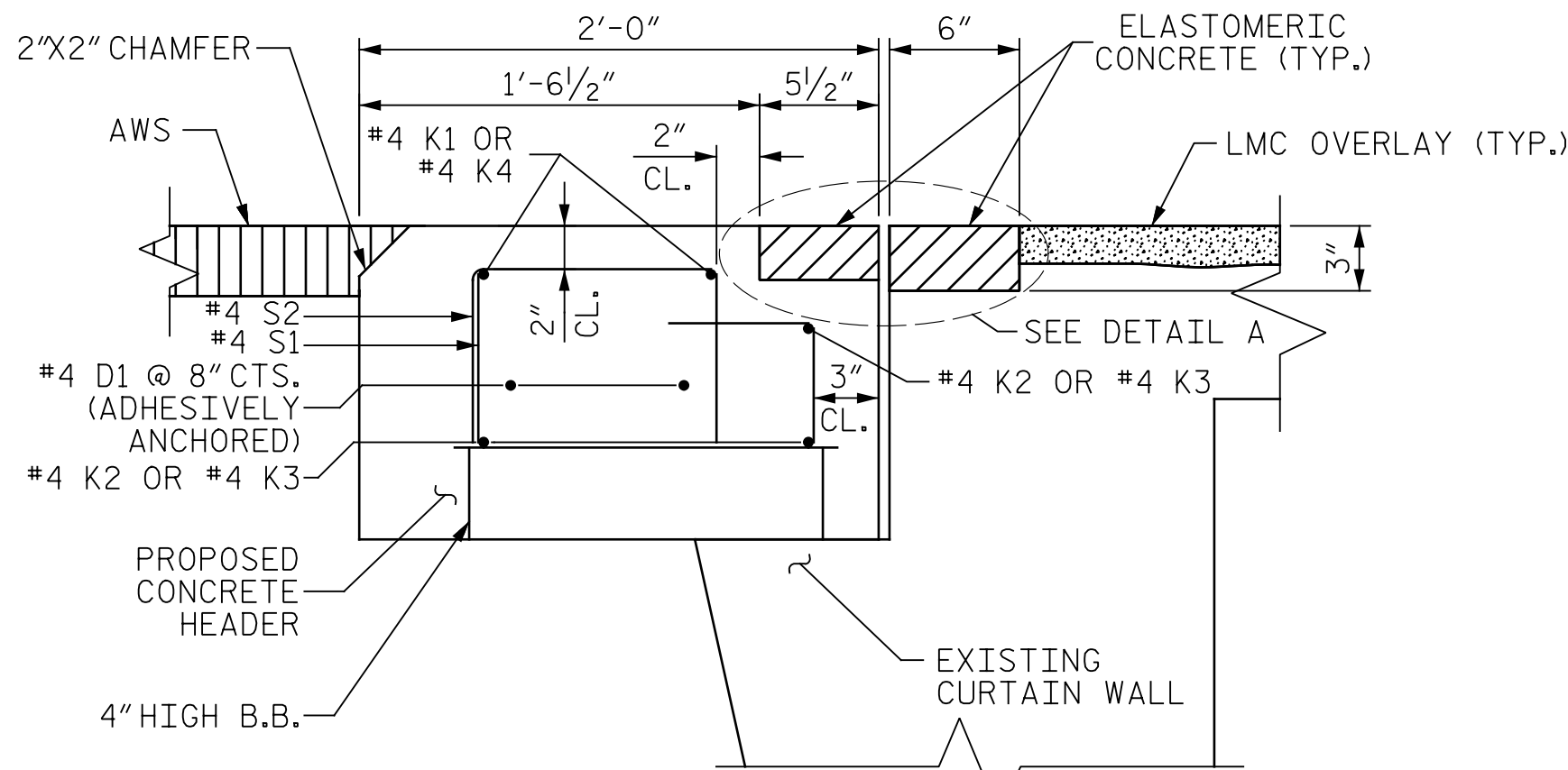
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SIGNATURES COMPLETED



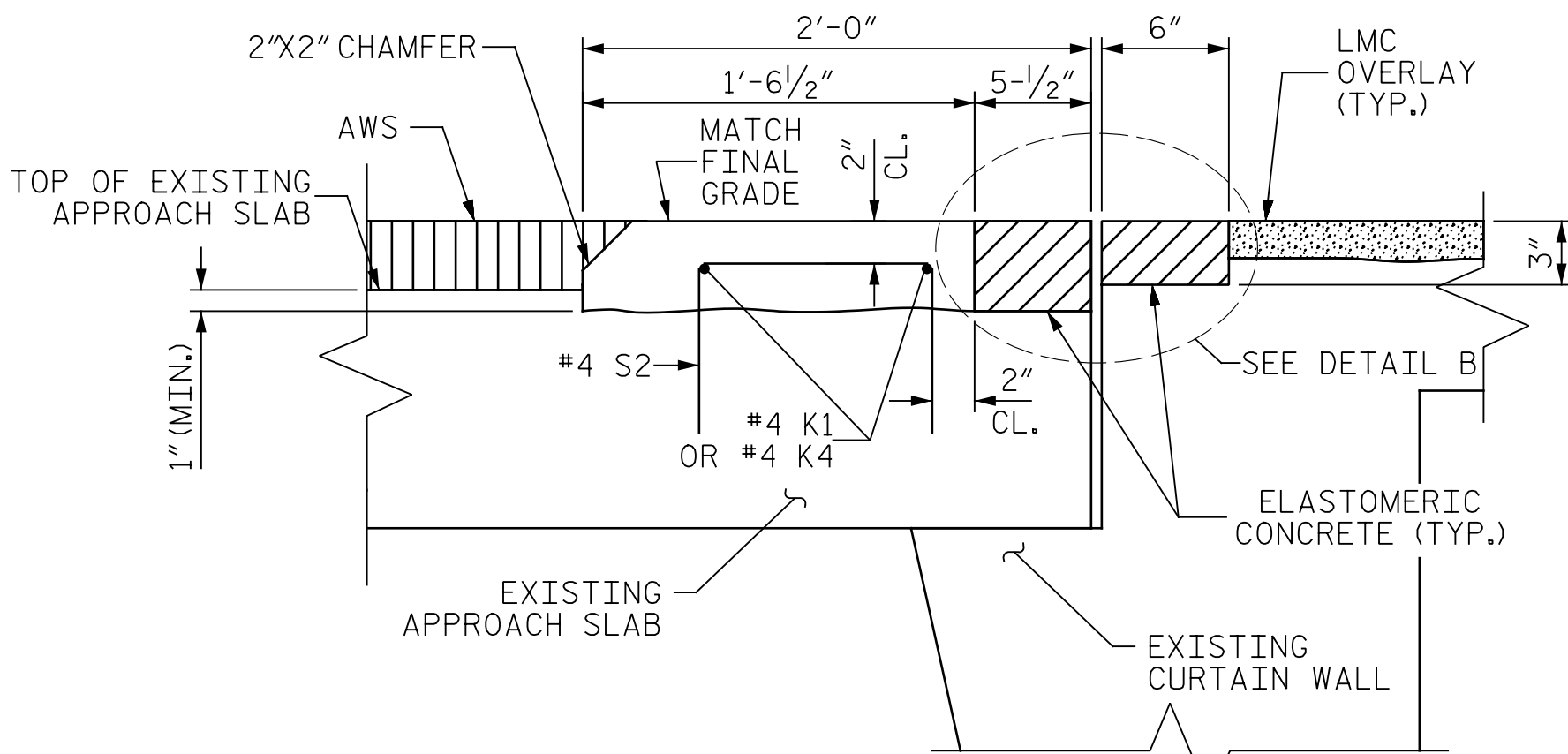
PLAN OF SPAN 'C'
(SEE SHEET NO. S-112 AND S-113 FOR SECTIONS A-A, B-B, AND C-C)



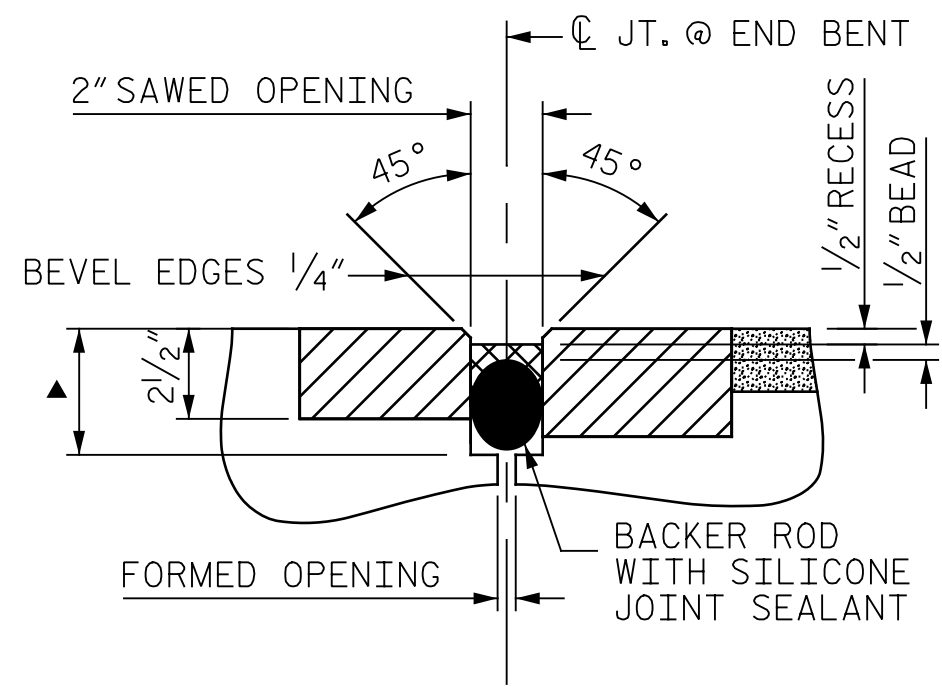
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

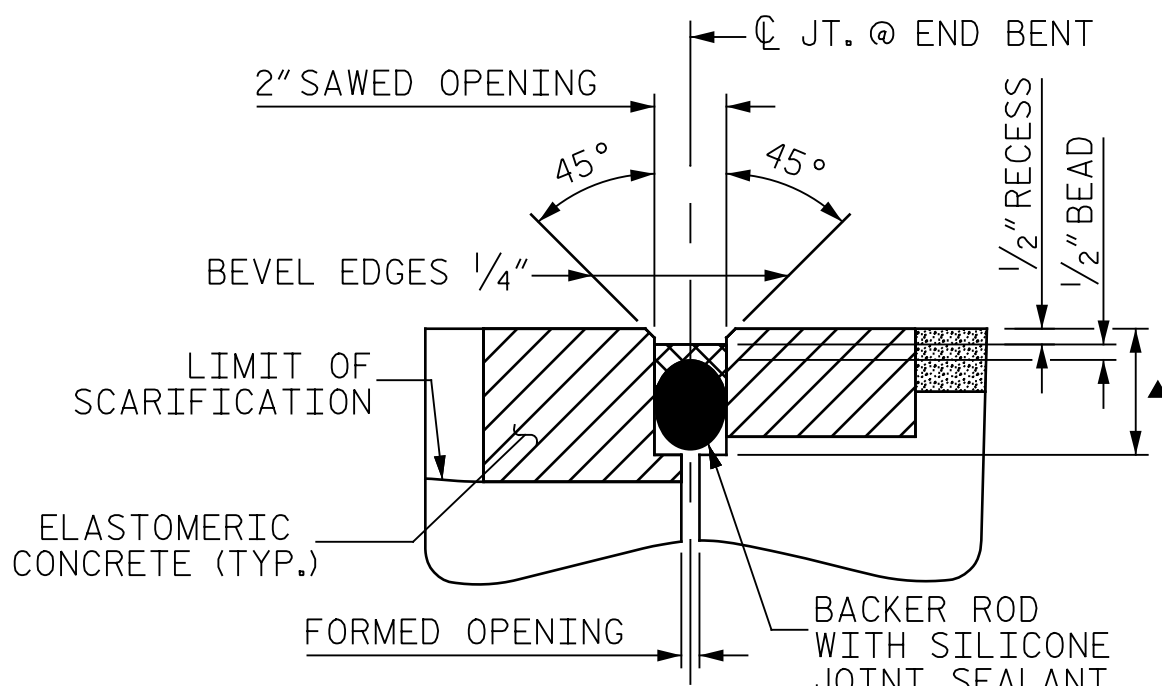


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



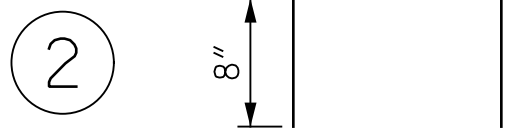
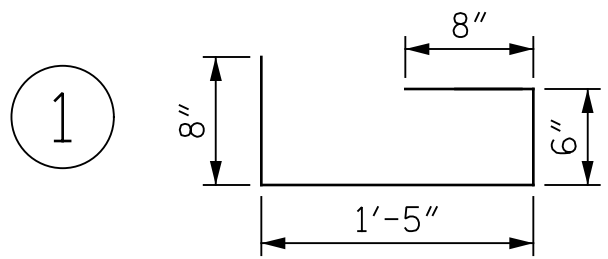
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	2	#4	STR	30'-1"	40
K2	3	#4	STR	5'-8"	12
K3	3	#4	STR	9'-9"	20
K4	2	#4	STR	17'-11"	24
S1	16	#4	1	3'-3"	35
S2	48	#4	2	2'-5"	78

REINFORCING STEEL 213 LBS

CLASS AA CONCRETE 2.1 CY

ELASTOMERIC CONCRETE 12.8 CF

NOTES

THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS



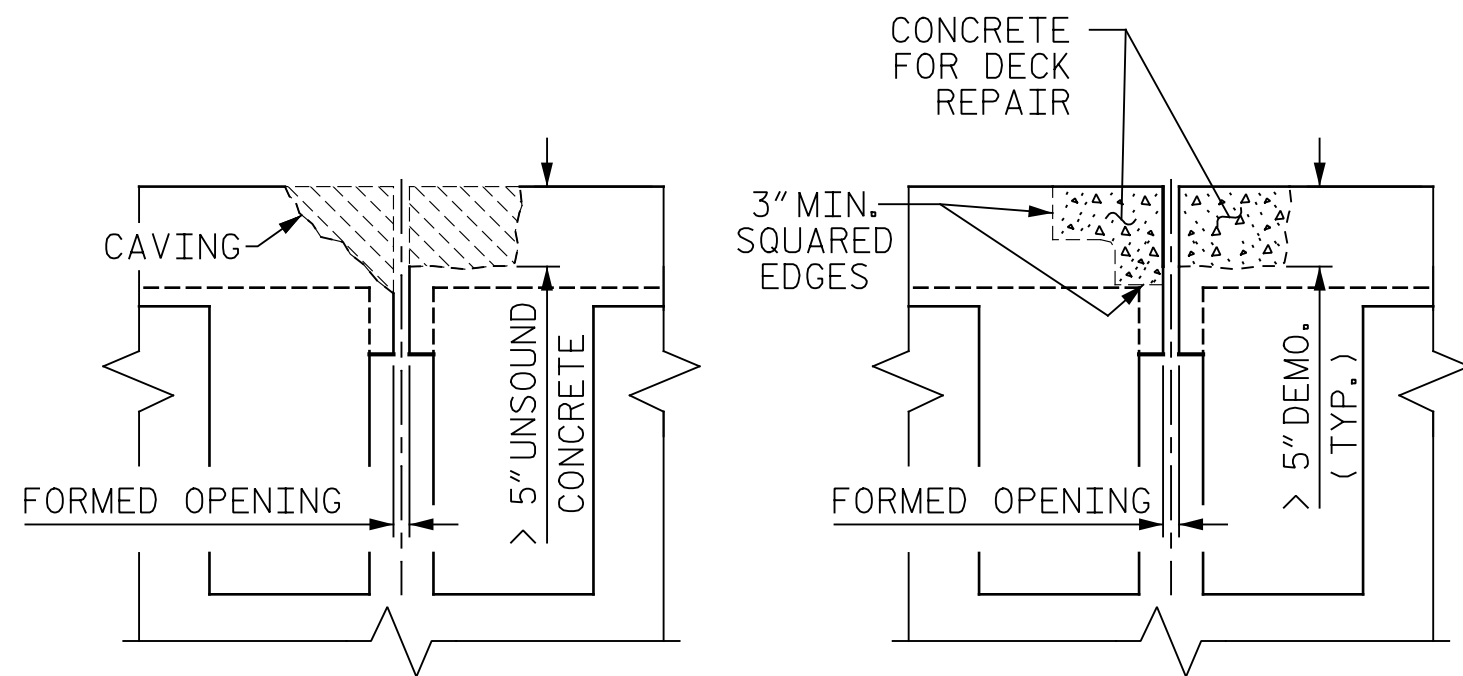
DocuSigned by:
Eric B. Nelson
4/3/2018

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
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Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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2			4			



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

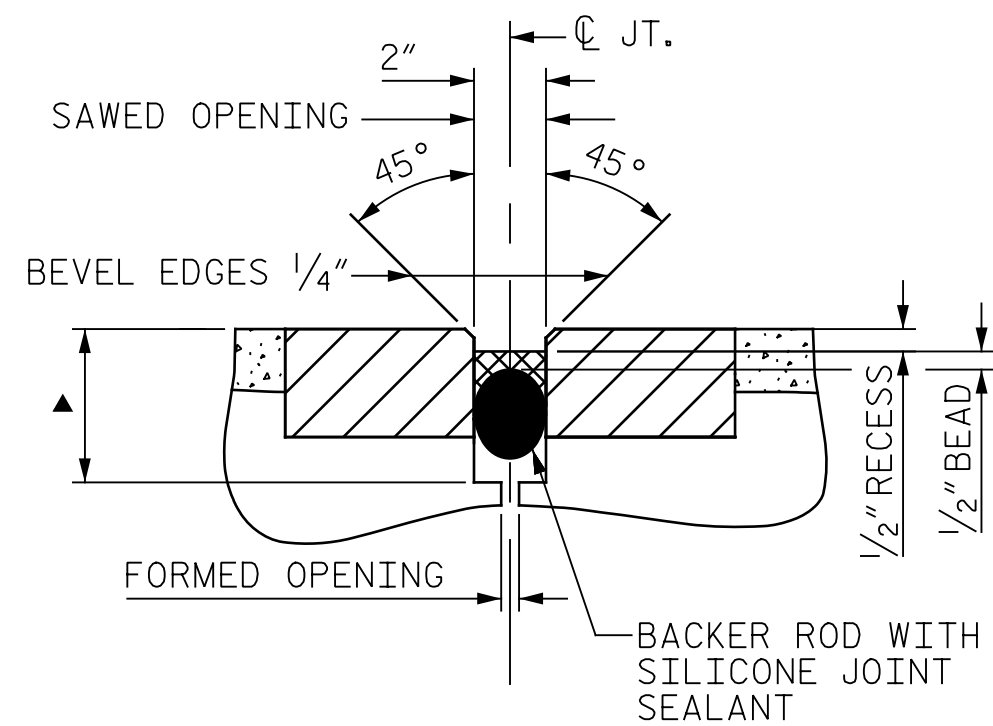
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

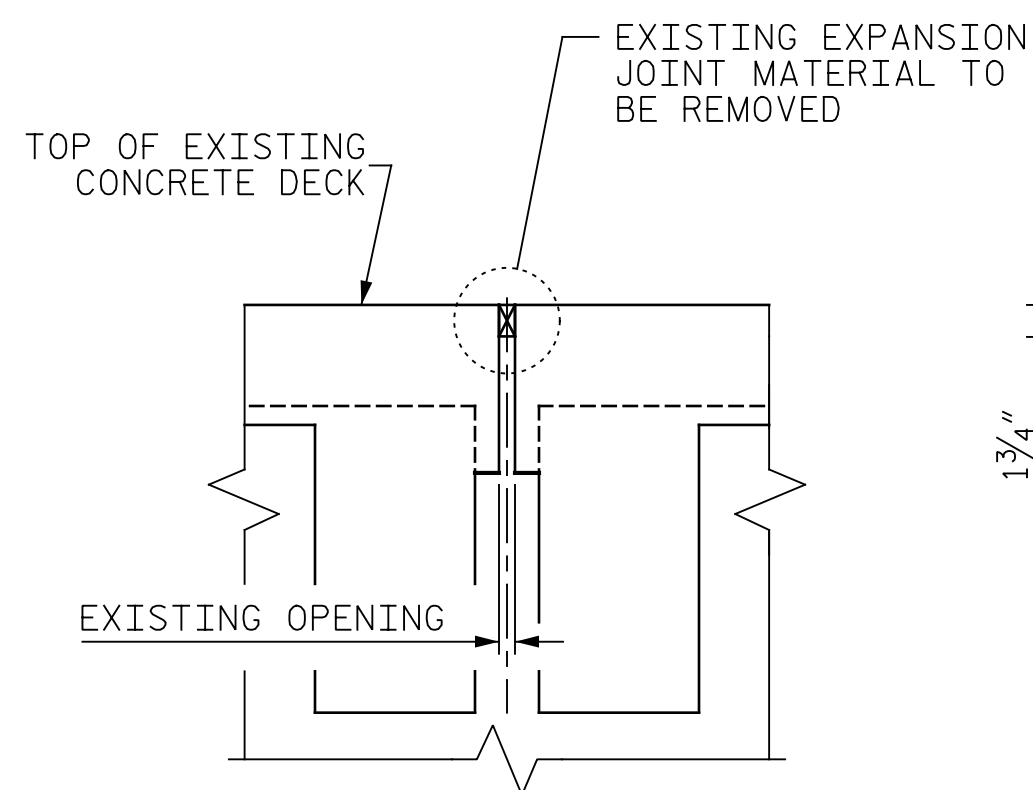
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



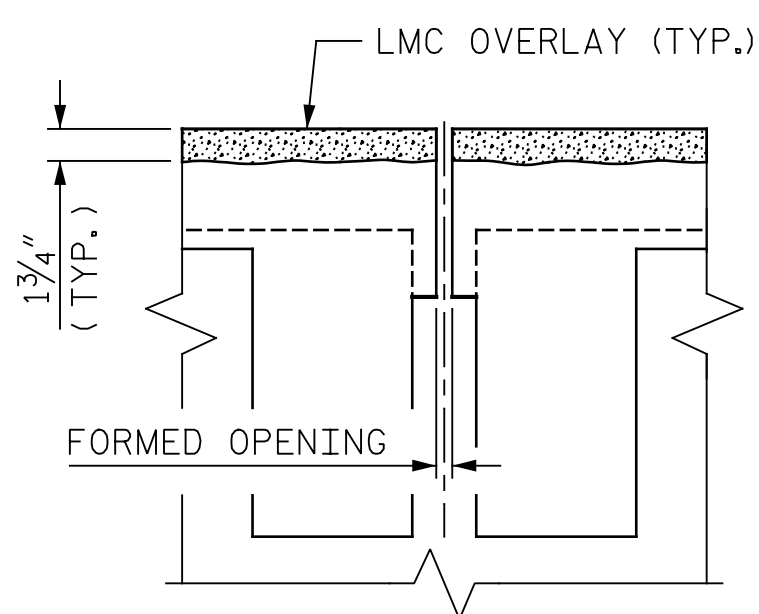
DETAIL A

(PROPOSED JOINT WITH SAWED DIMENSIONS)

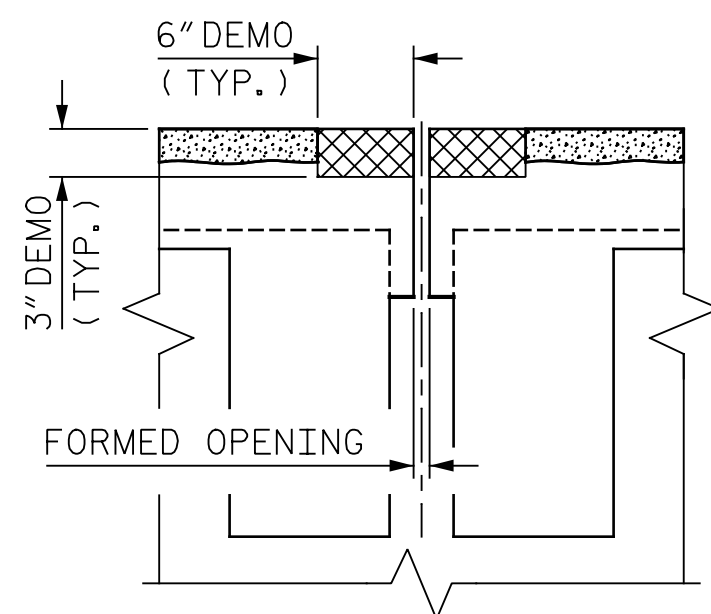
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



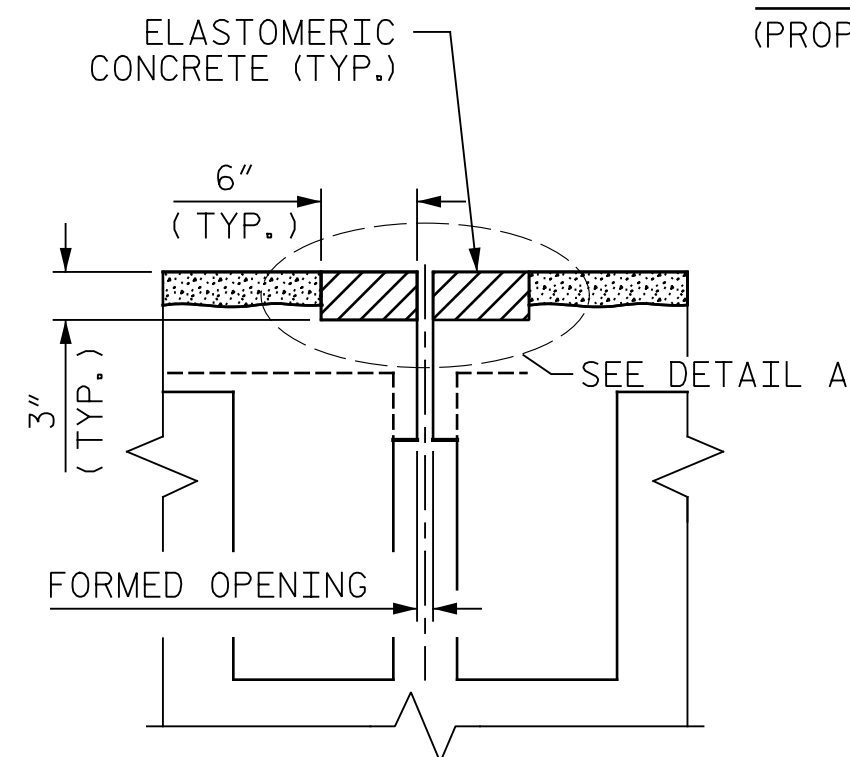
EXISTING



PROPOSED
LMC OVERLAY



MINIMUM
JOINT DEMOLITION

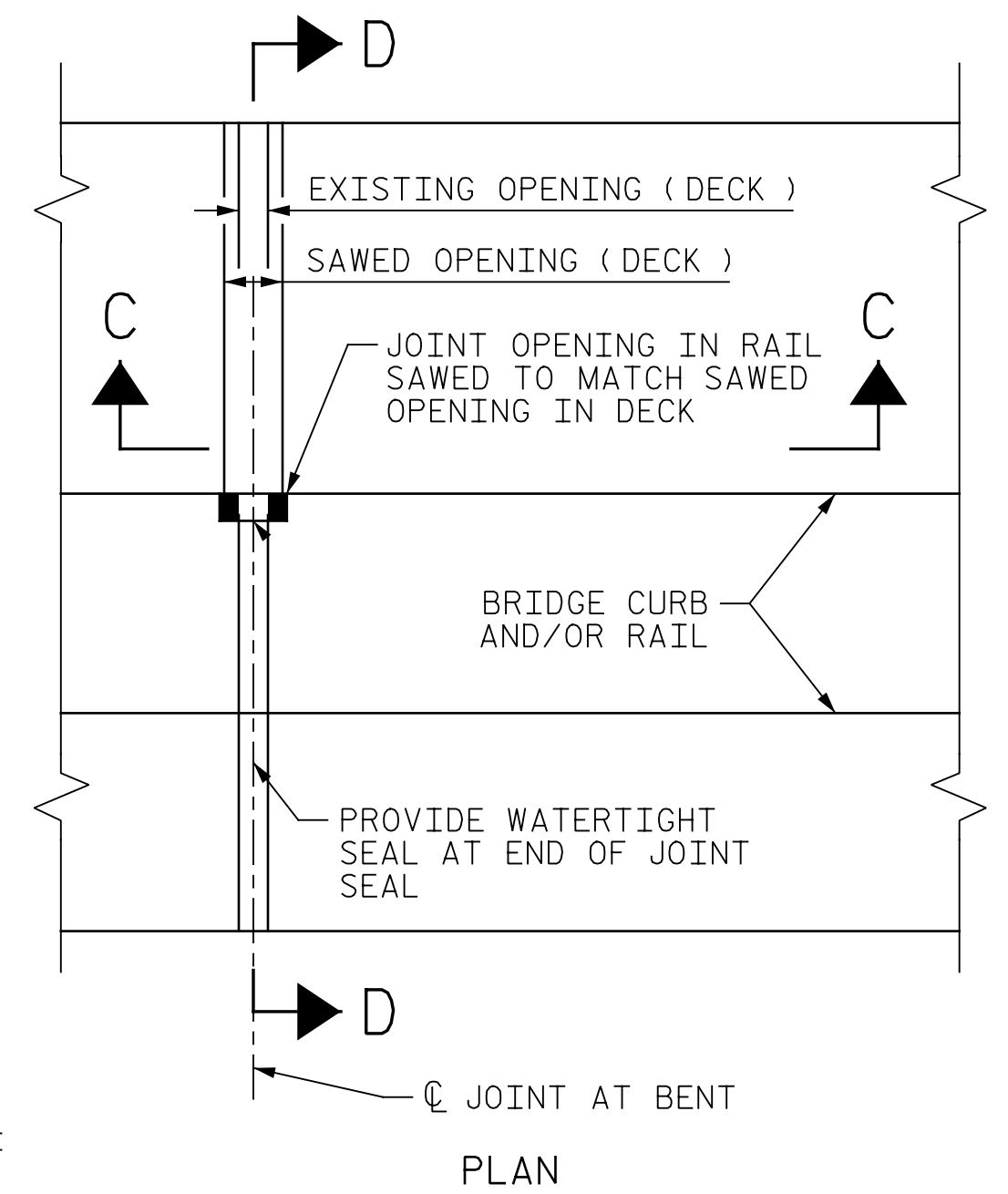


PROPOSED JOINT
PRE-SAWED DIMENSIONS

SECTION C-C

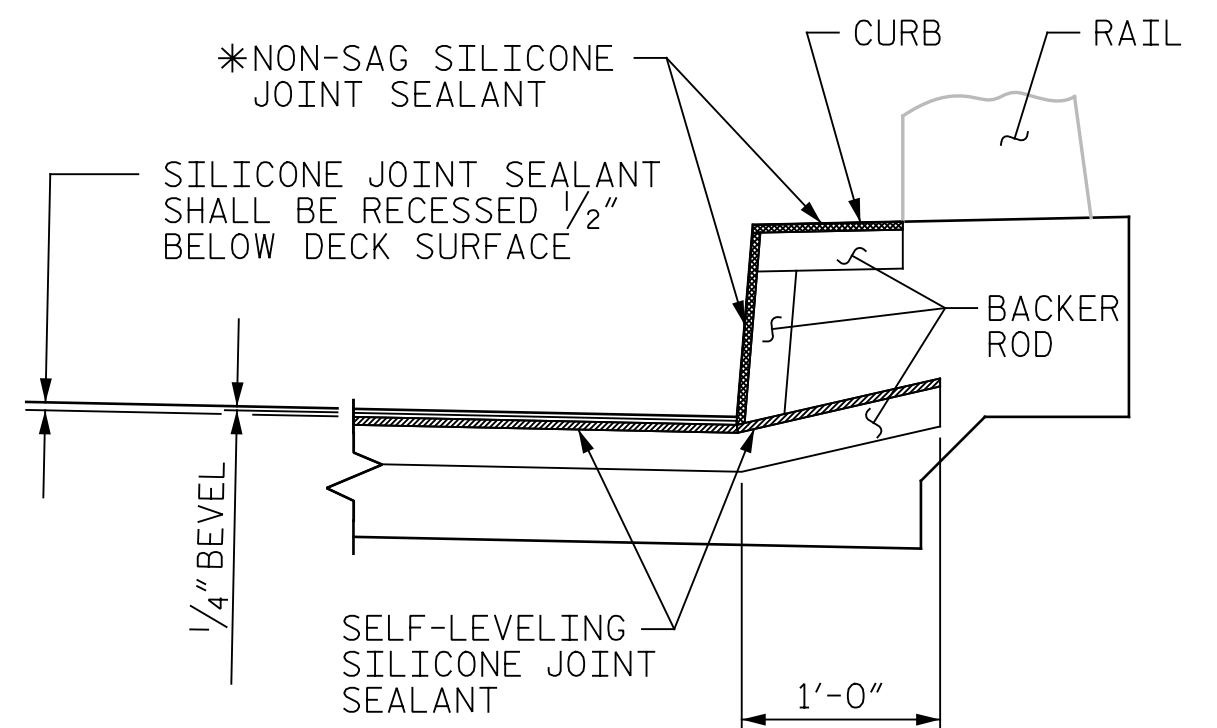
ELASTOMERIC CONCRETE	
BENT 1	12.4 CF
BENT 2	12.4 CF

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE



PLAN

*SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO. S-114
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

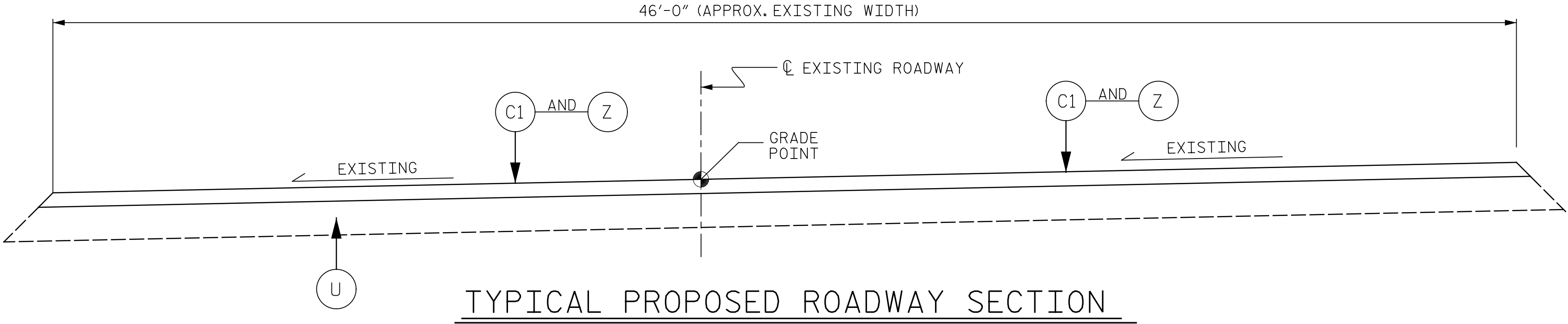
DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
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Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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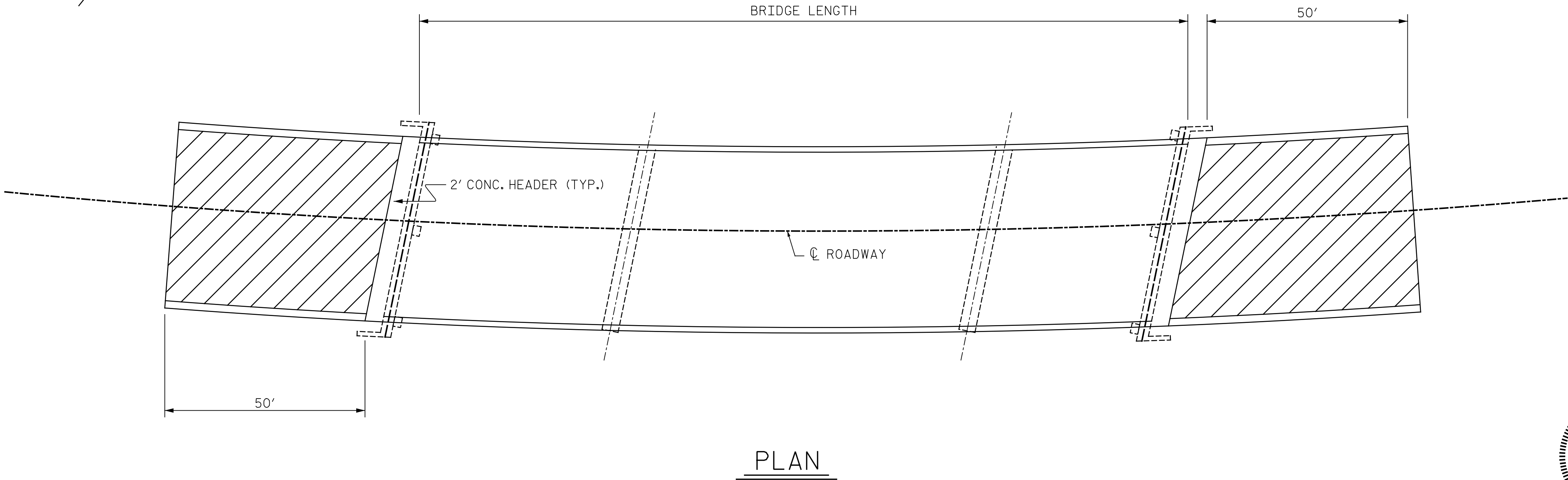
PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	553 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	47 TONS	
ASPHALT BINDER FOR PLANT MIX	3 TONS	



NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



INCIDENTAL MILLING

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 110



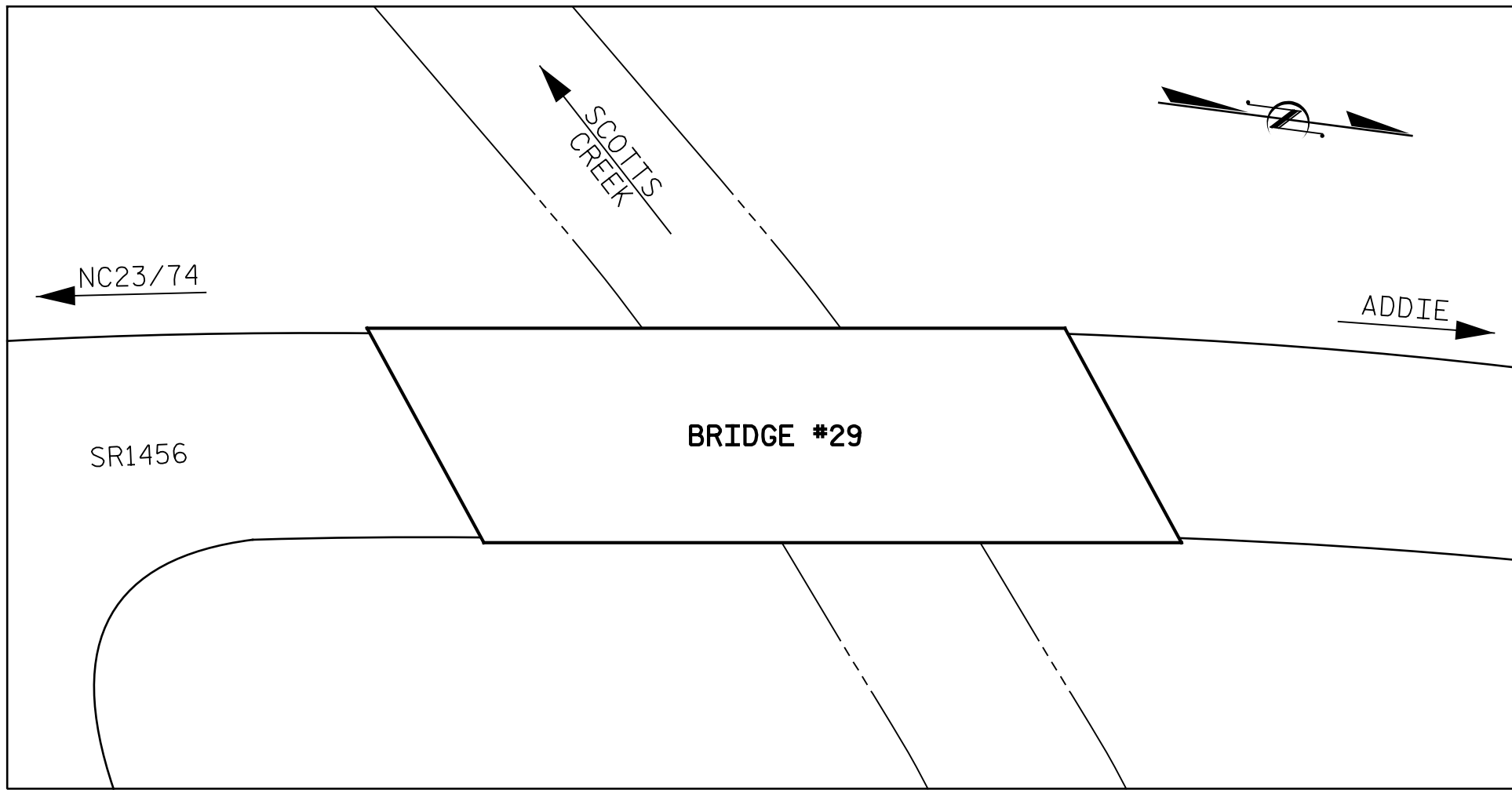
DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018
BAGF9176207044A...

DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

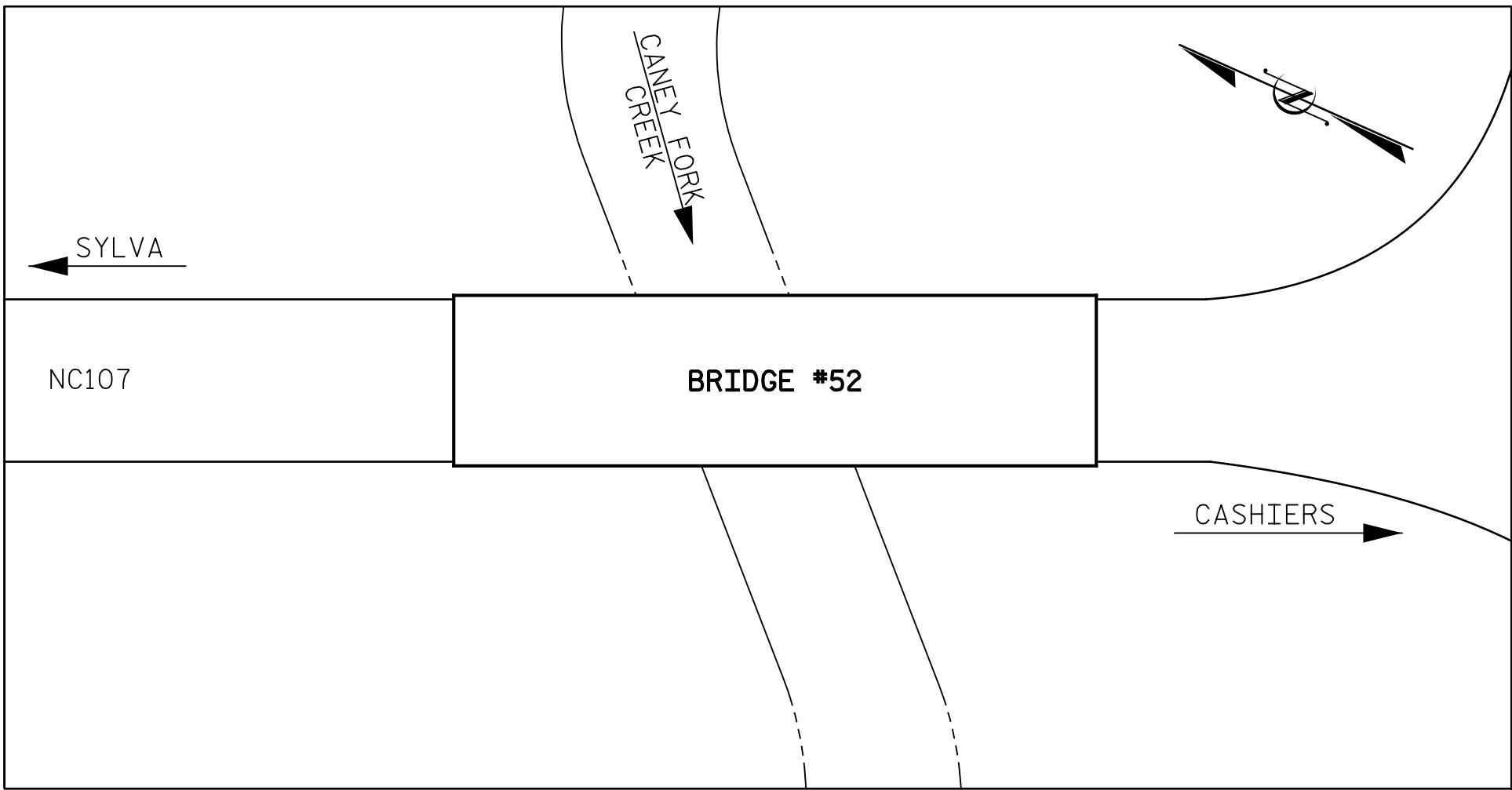
PLANS PREPARED BY:
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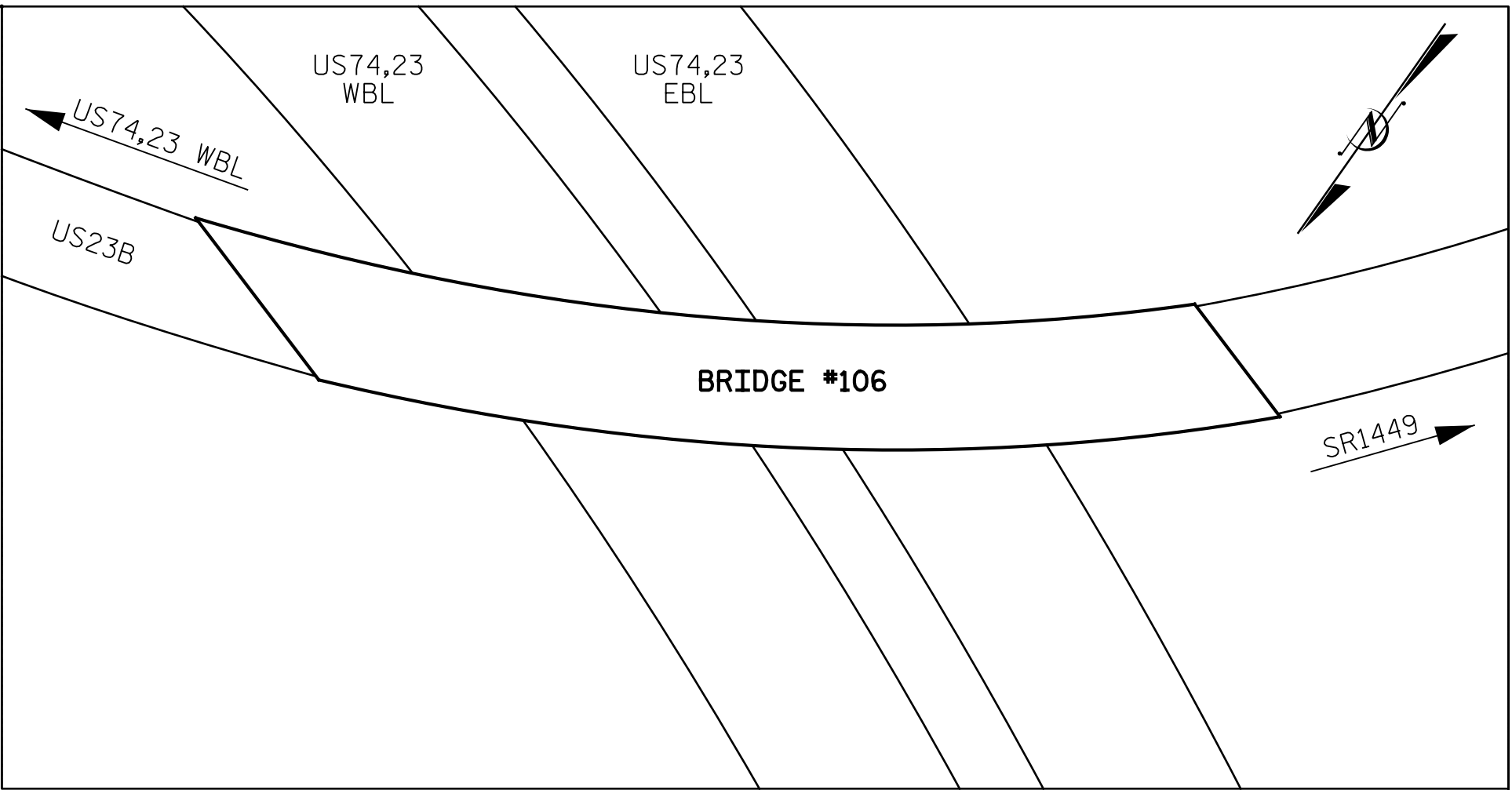
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					TOTAL SHEETS
S-115					142



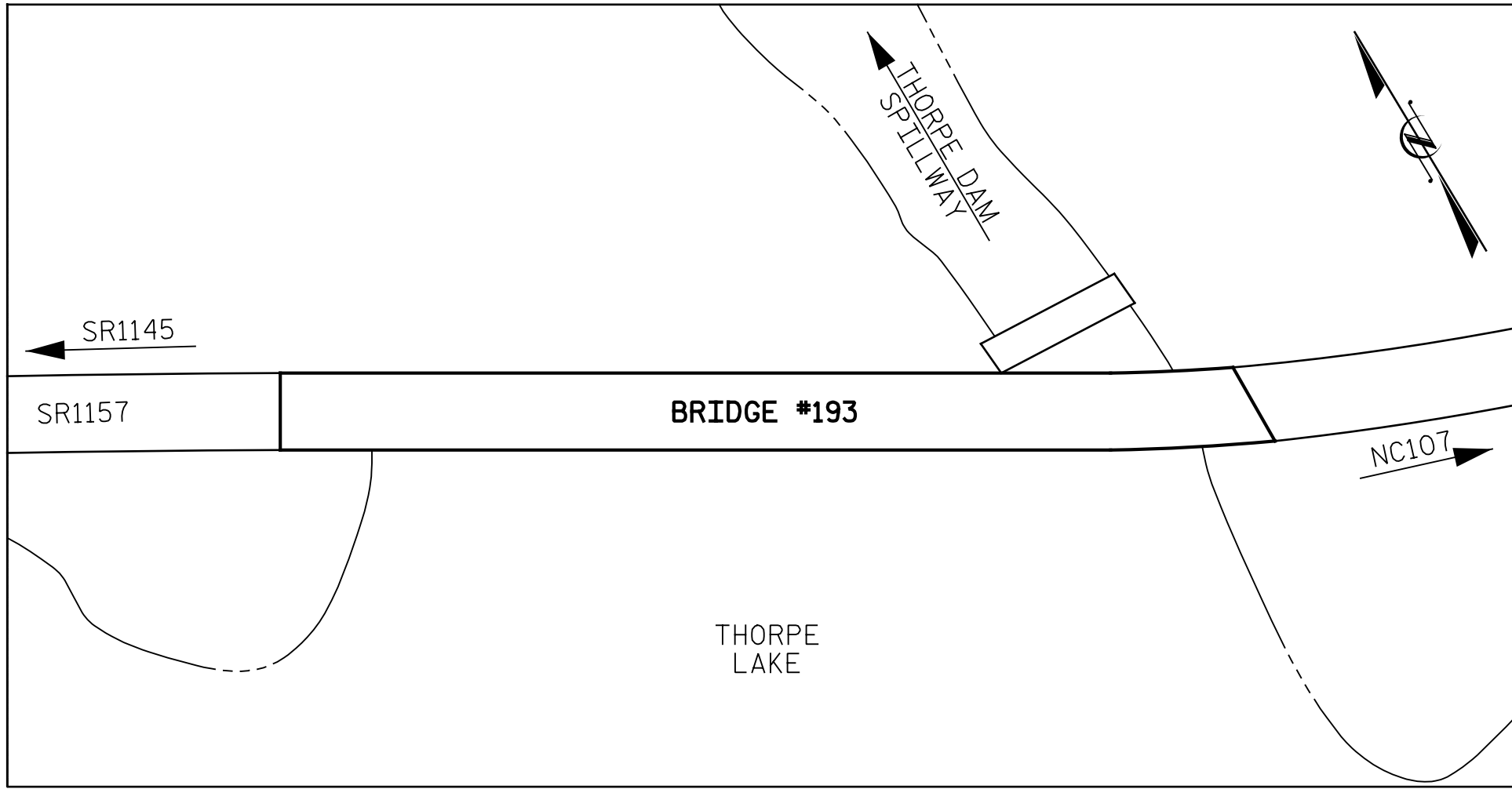
BRIDGE #29



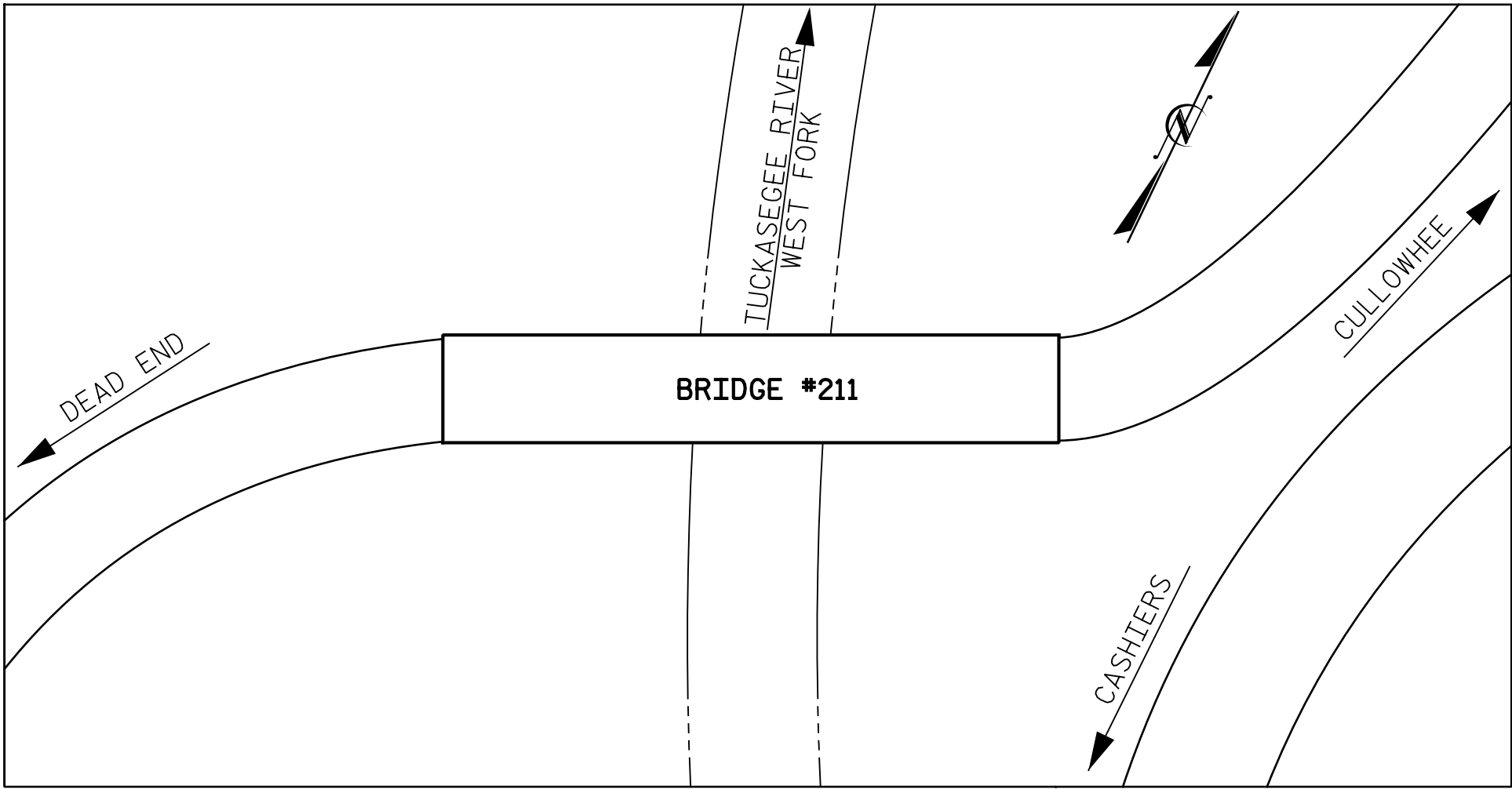
BRIDGE #52



BRIDGE #106



BRIDGE #193



BRIDGE #211

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

- FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL, SEE SPECIAL PROVISIONS.
- FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.
- FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
JACKSON COUNTY

SHEET 1 OF 2



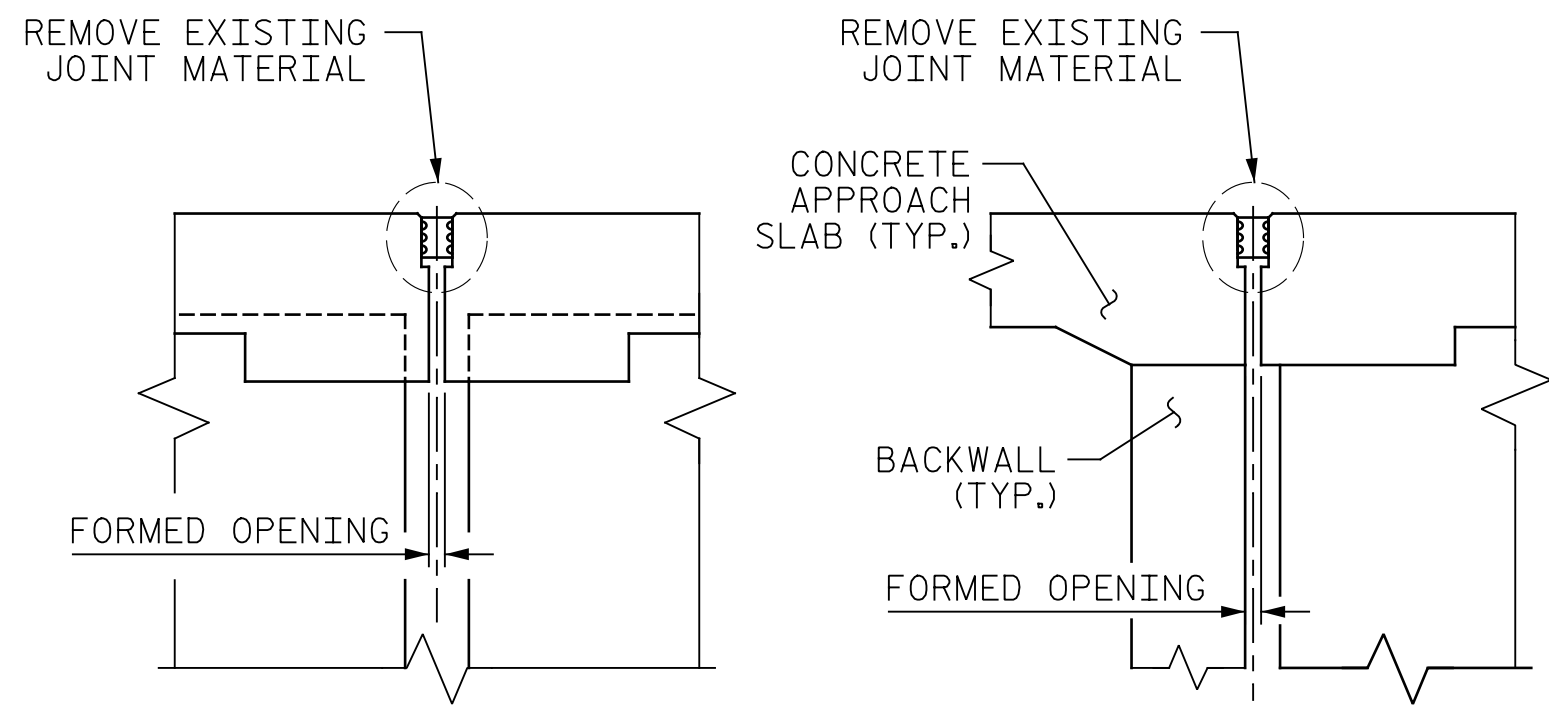
DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

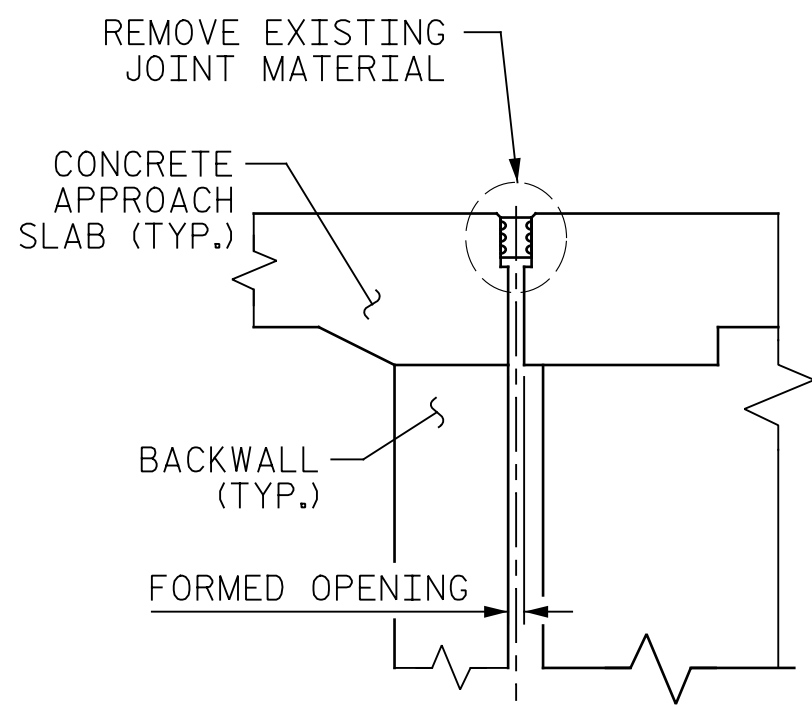
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FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-116	
1			3			TOTAL SHEETS 142	
2			4				

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

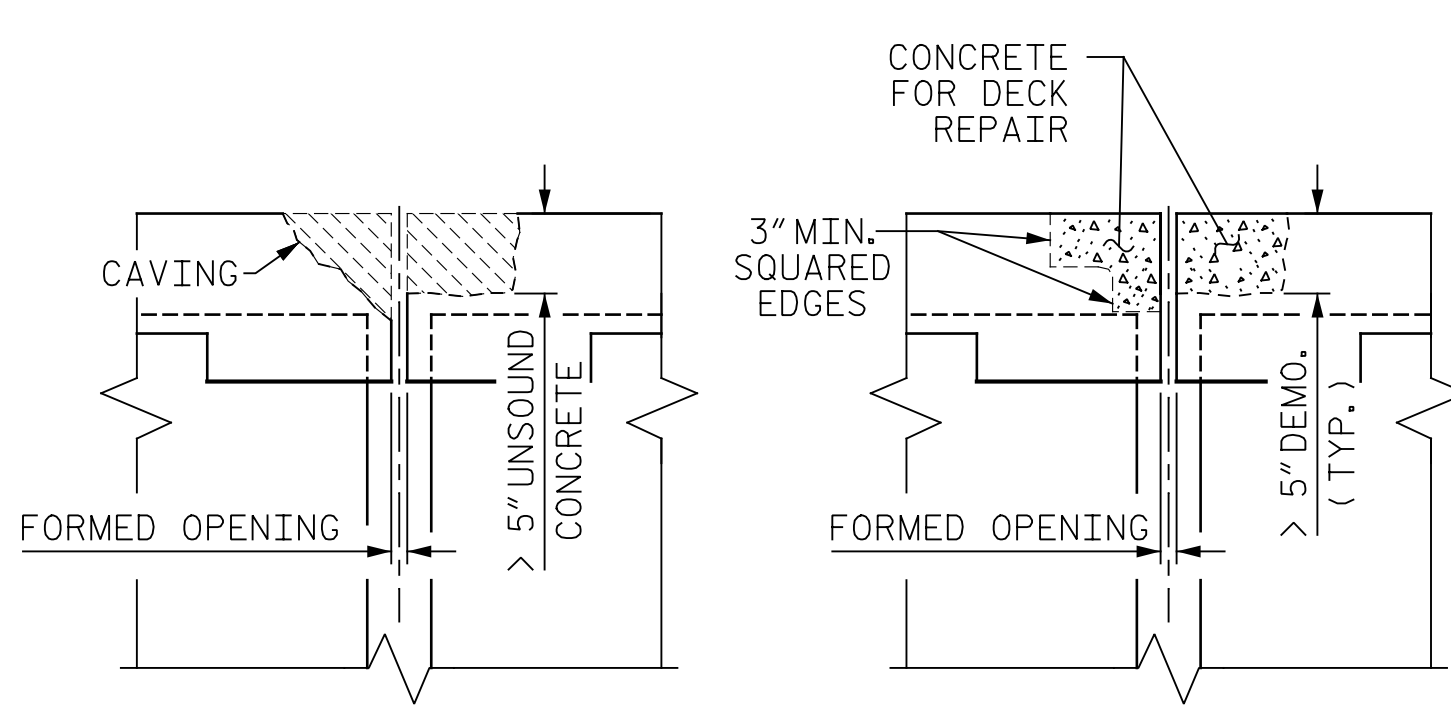


EXISTING JOINT
(FOAM OR COMPRESSED
SEAL WITH NO HEADER)
(INT. BENT)



EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)

EXISTING JOINT TYPES



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

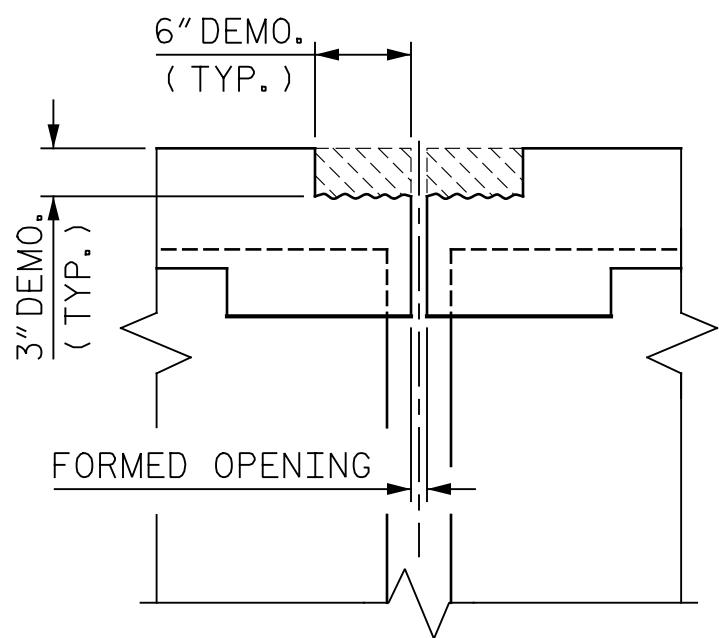
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

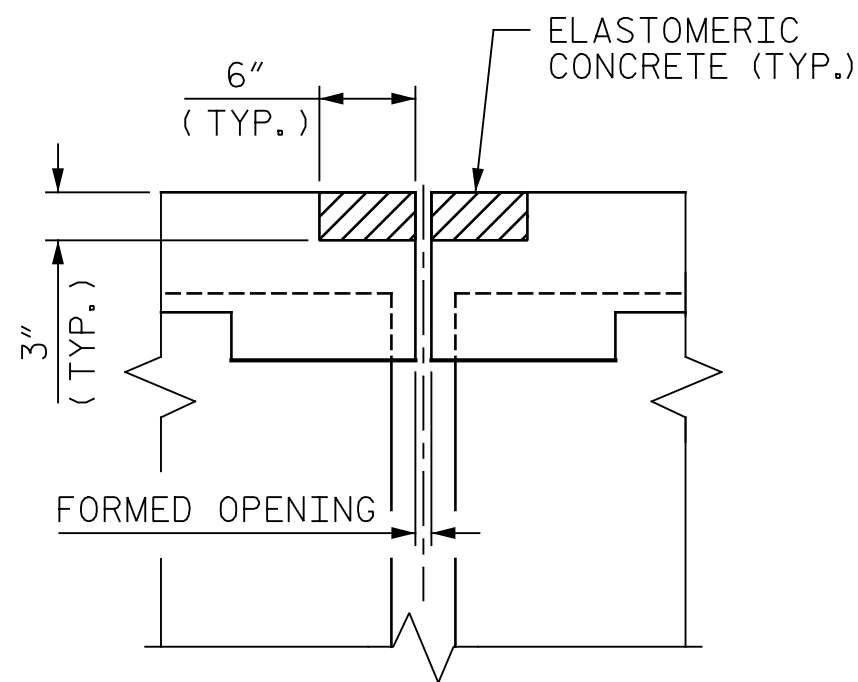
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

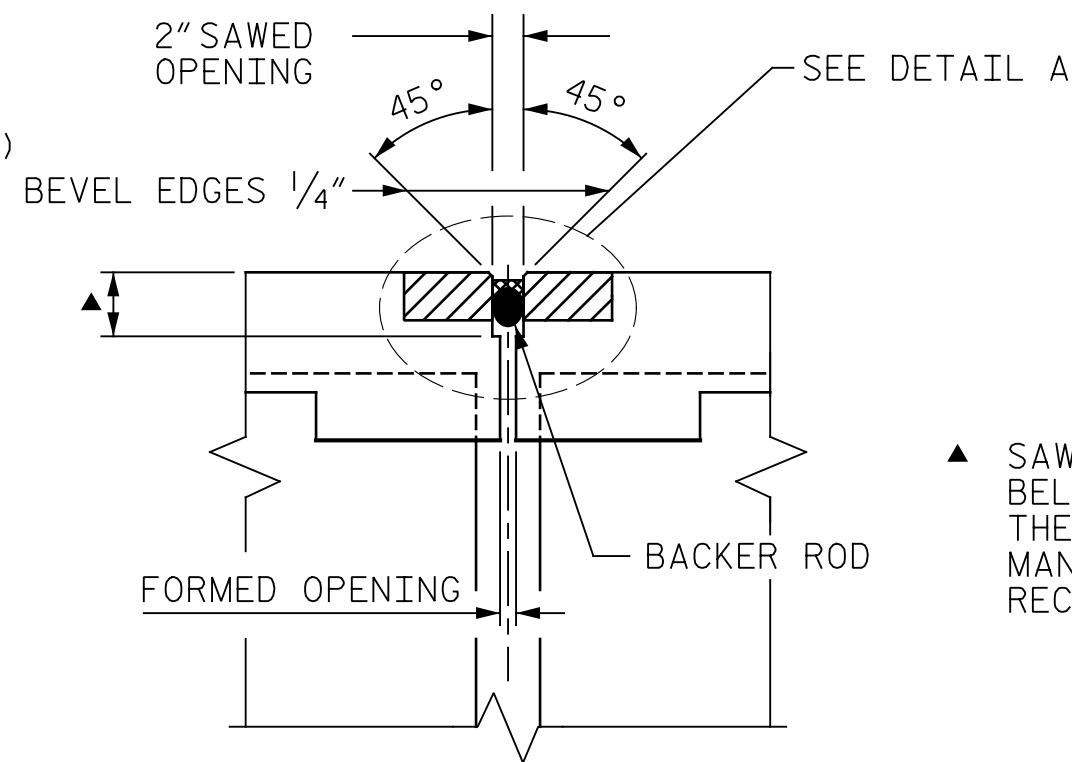
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



MINIMUM
JOINT DEMOLITION

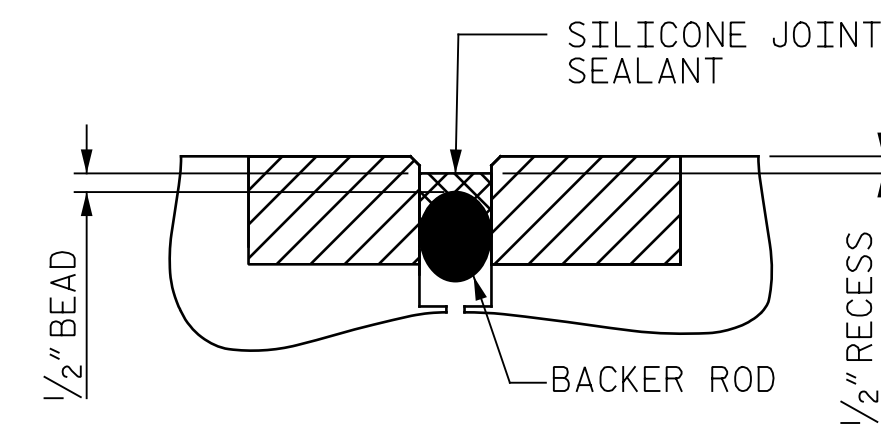


PROPOSED JOINT
PRE-SAWED DIMENSIONS

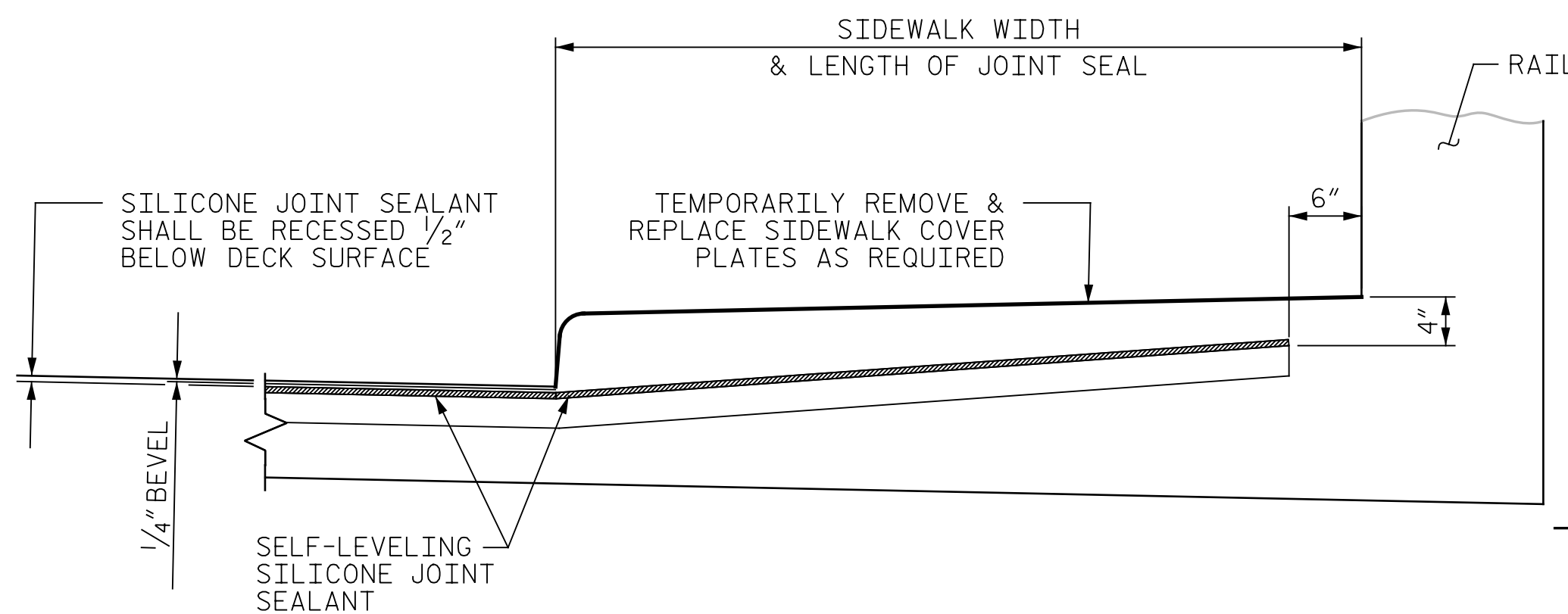


PROPOSED SILICONE
JOINT SEAL

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL A



JOINT SEAL DETAILS AT SIDEWALK

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

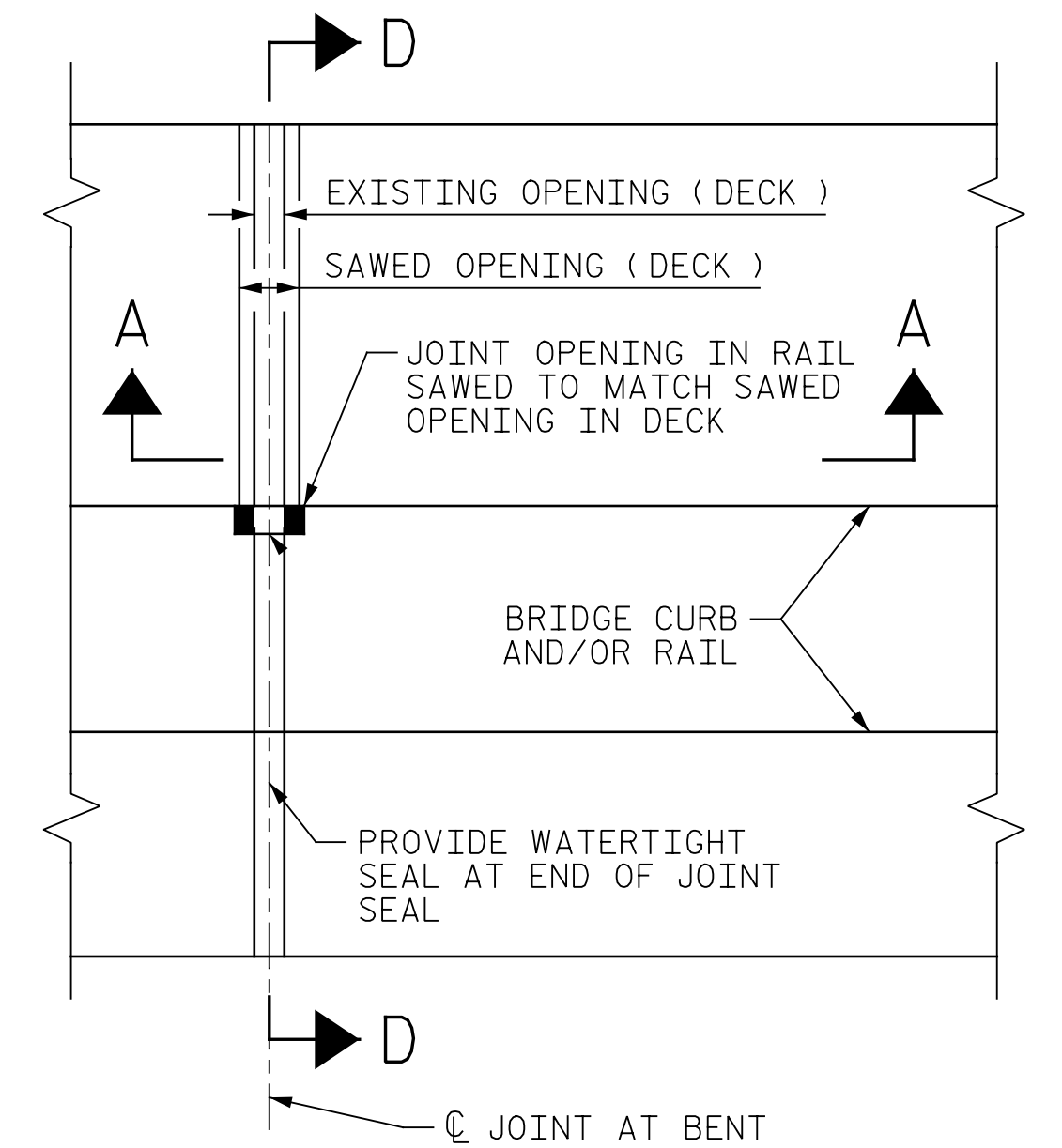
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

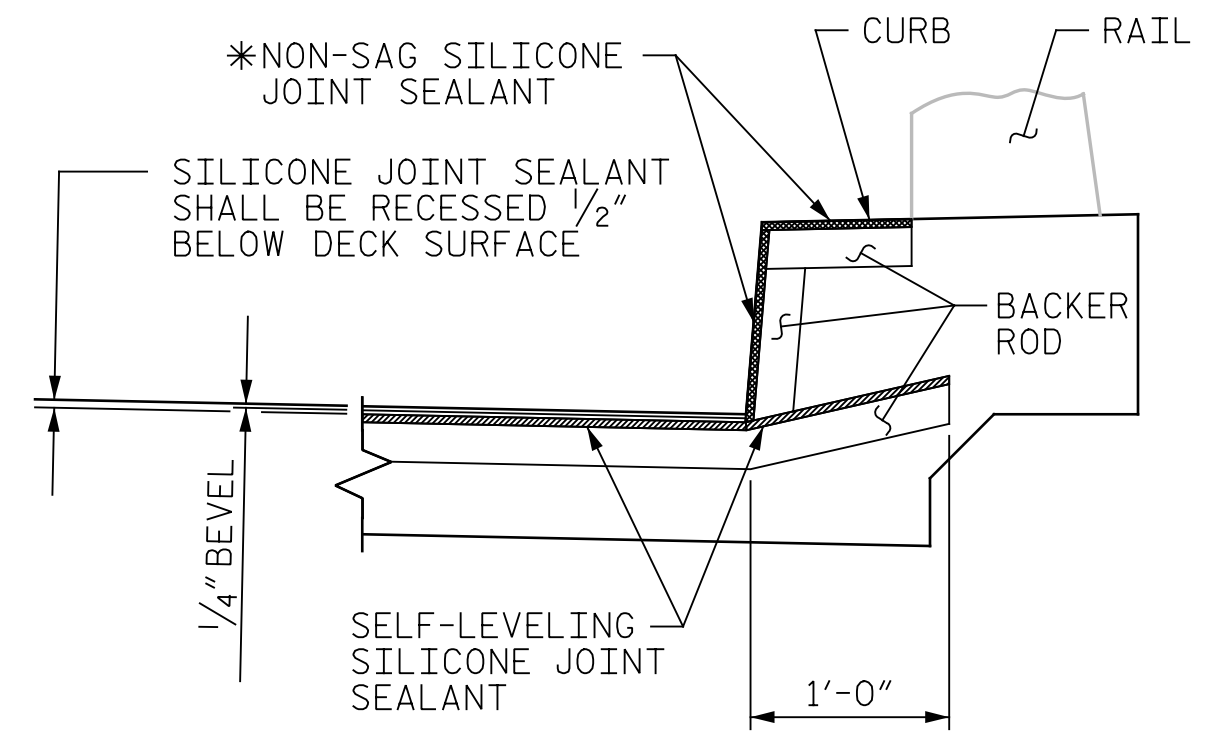
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



PLAN

*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

BRIDGE NO.	SILICONE JOINT SEAL (LF)						ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)											
	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	BENT 4	DIM.	EB 2	DIM.
490029	41.5	-	-	-	-	41.5	8.4	(2) 6"x3"	-	-	-	-	-	-	-	-	8.4	(2) 6"x3"
490052	47.0	47.0	47.0	-	-	47.0	11.0	(2) 6"x3"	11.0	(2) 6"x3"	11.0	(2) 6"x3"	-	-	-	-	11.0	(2) 6"x3"
490193	33.1	-	-	-	-	33.1	7.5	(2) 6"x3"	-	-	-	-	-	-	-	-	7.5	(2) 6"x3"

BRIDGE NO.	JOINT DEMOLITION (SF)						CONCRETE FOR DECK REPAIR (CF)					
	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2
490029	33.6	-	-	-	-	33.6	-	-	-	-	-	-
490052	44.0	44.0	44.0	-	-	44.0	-	-	-	-	-	-
490193	30.1	-	-	-	-	30.1	-	-	-	-	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

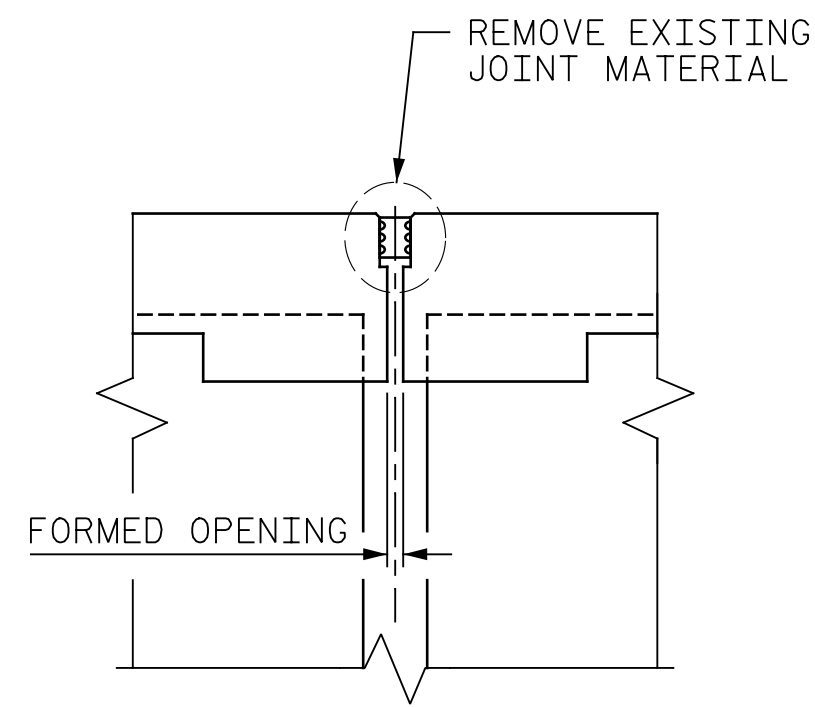
DocuSigned by:
Eric B. Nelson Jr.
4/3/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

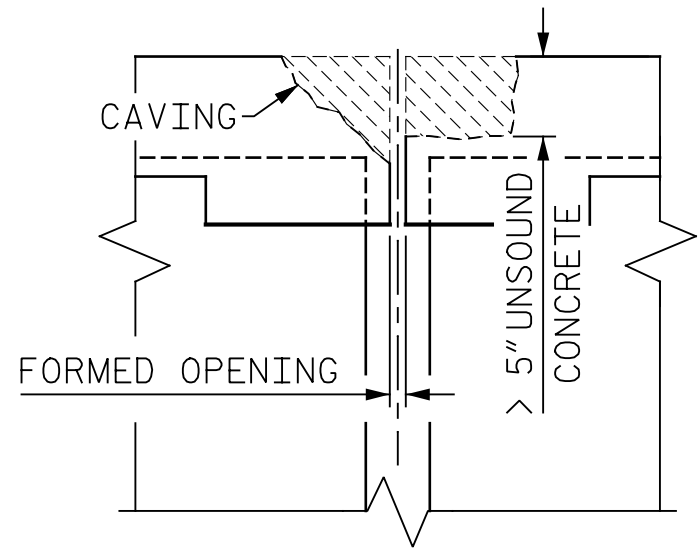
PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 29, 52, 193

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
JOINT DETAIL FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

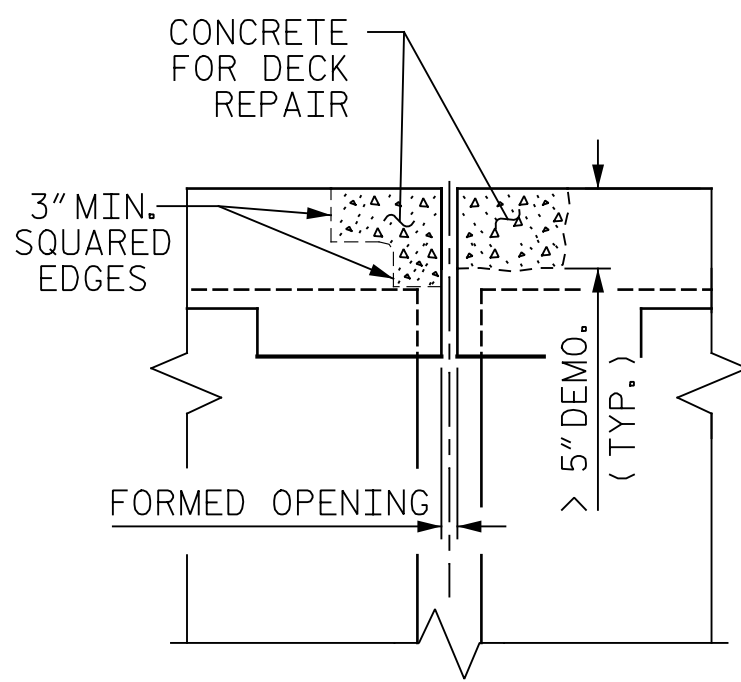
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-117	
1			3			TOTAL SHEETS	
2			4			142	



EXISTING JOINT
(FOAM OR COMPRESSED SEAL
WITH NO HEADER)



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



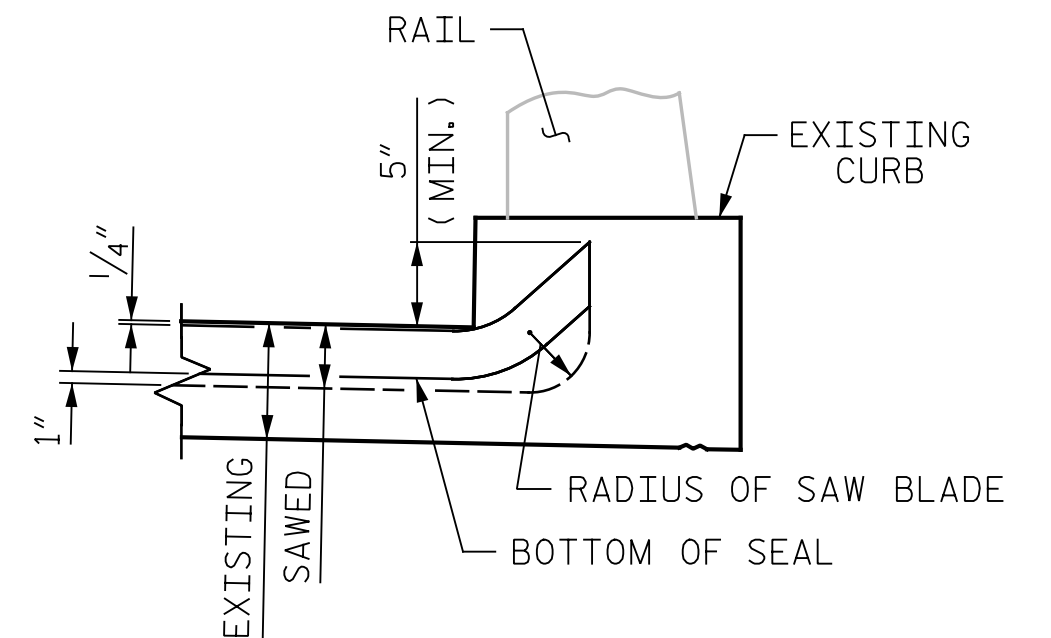
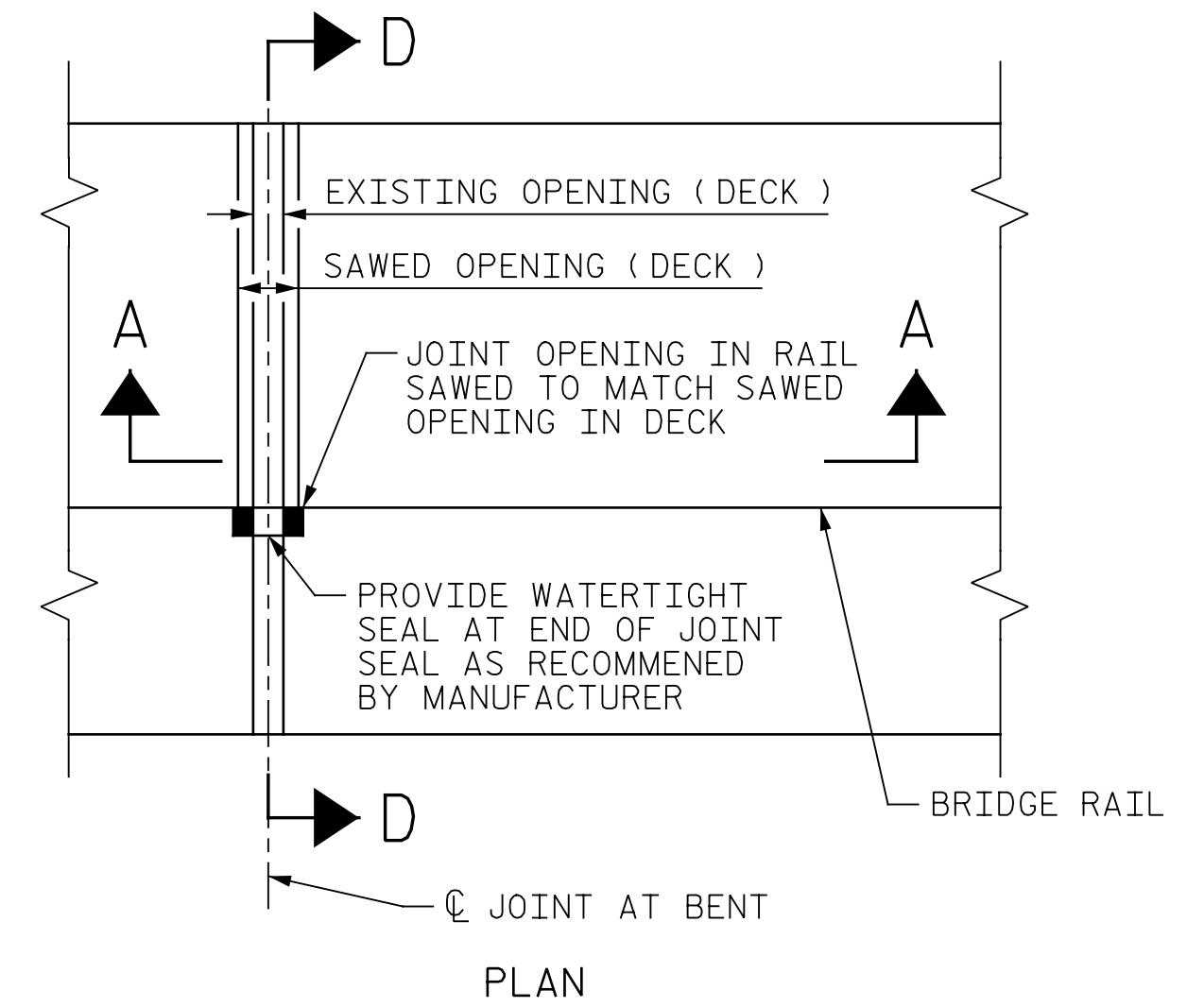
REPAIRED JOINT

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

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THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SYNTHETIC RUBBER JOINT SEAL, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

PROVIDE JOINT SEALS AT BENT 1 WITH A MOVEMENT RATING OF 4".

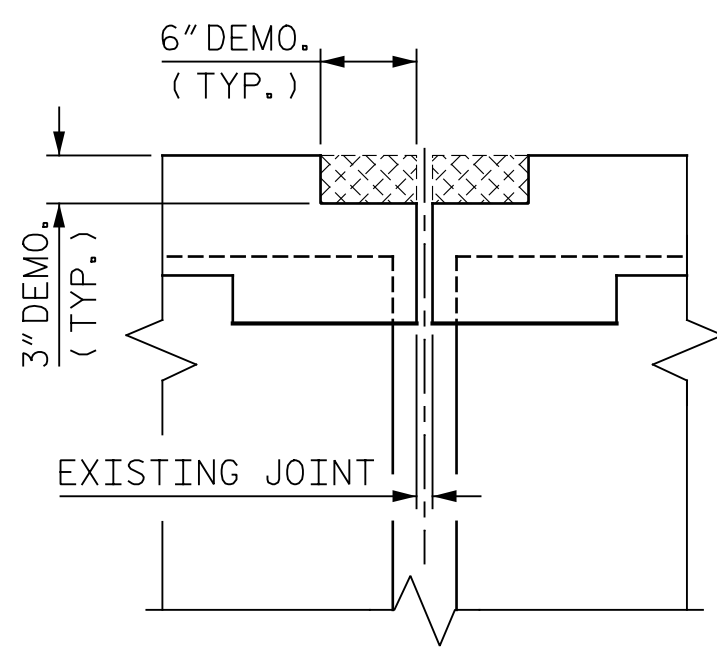
PROVIDE JOINT SEALS AT BENT 4 WITH A MOVEMENT RATING OF 2 1/4".

JOINT SEAL DETAILS AT BENT

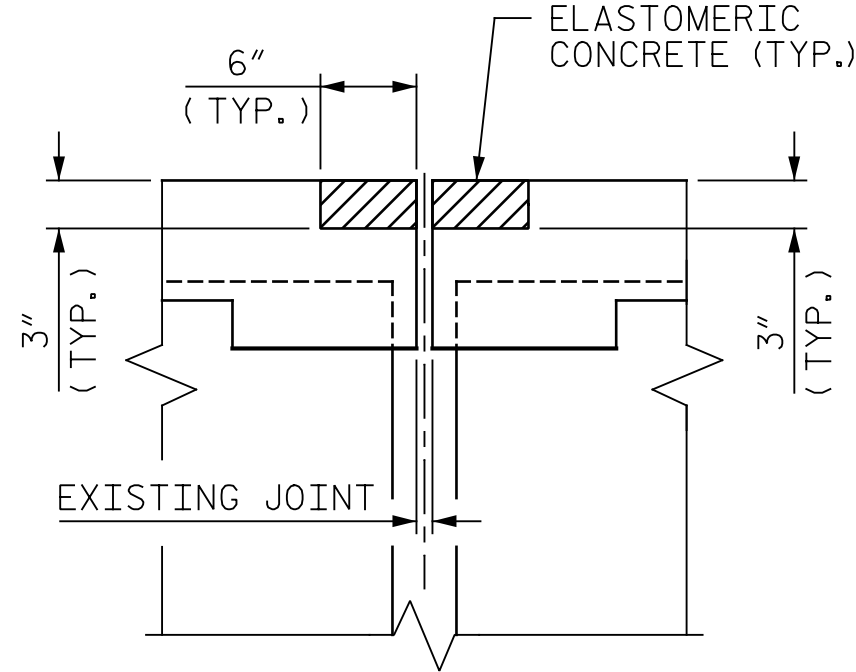
EXISTING JOINT TYPES

CONCRETE FOR DECK REPAIR DETAIL

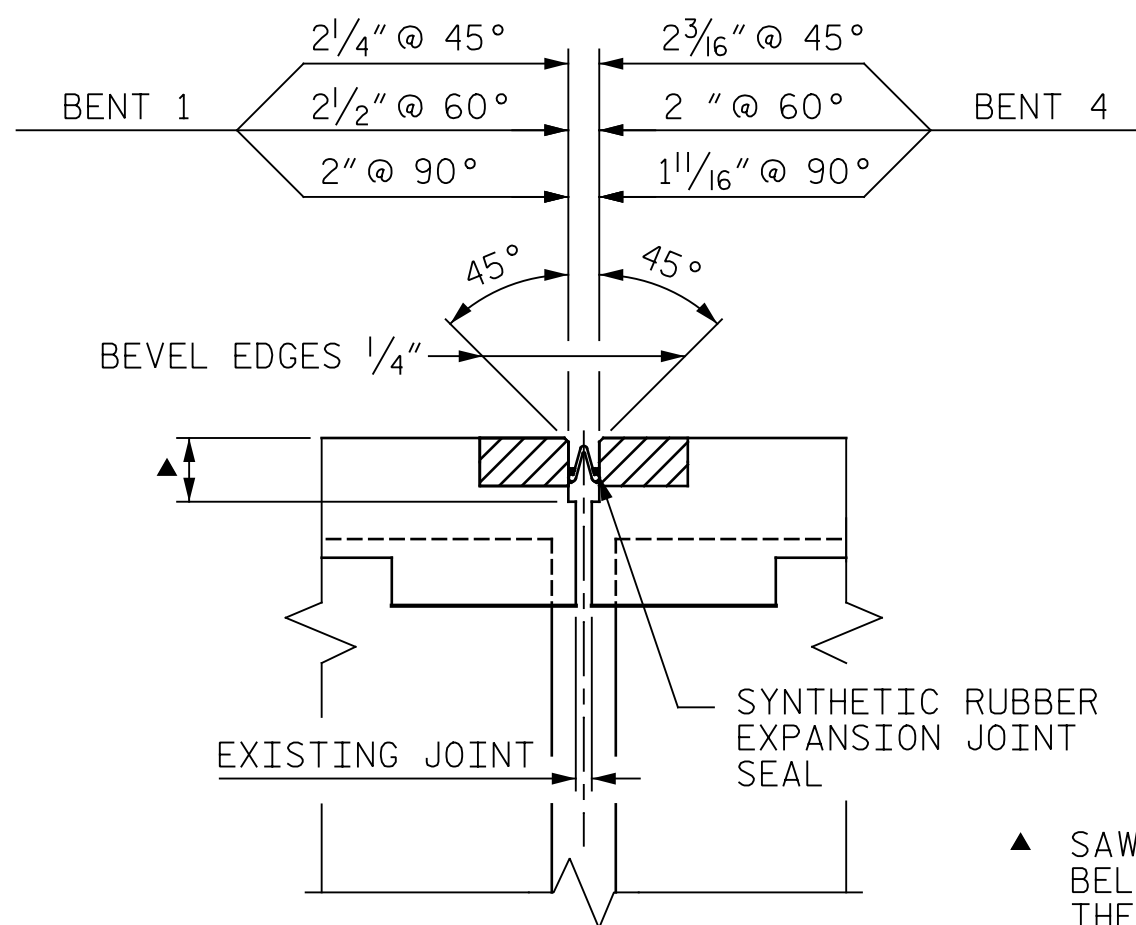
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)



MINIMUM EXISTING
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS



PROPOSED SYNTHETIC
RUBBER JOINT SEAL

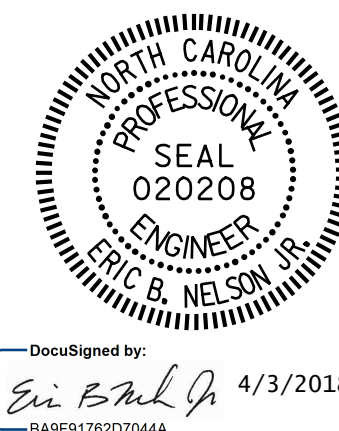
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS

SECTION A-A PROPOSED JOINT

BRIDGE NO.	SYNTHETIC RUBBER JOINT SEAL (LF)						ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)											
	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	BENT 4	DIM.	EB 2	DIM.
490193	-	32.1	-	-	32.1	-	-	-	7.5	(2) 6"x3"	-	-	-	-	7.5	(2) 6"x3"	-	-

BRIDGE NO.	JOINT DEMOLITION (SF)						CONCRETE FOR DECK REPAIR (CF)					
	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2
490193	-	30.1	-	-	30.1	-	-	-	-	-	-	-

PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 193



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
SYNTHETIC RUBBER
JOINT SEAL WITH
ELASTOMERIC HEADER

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

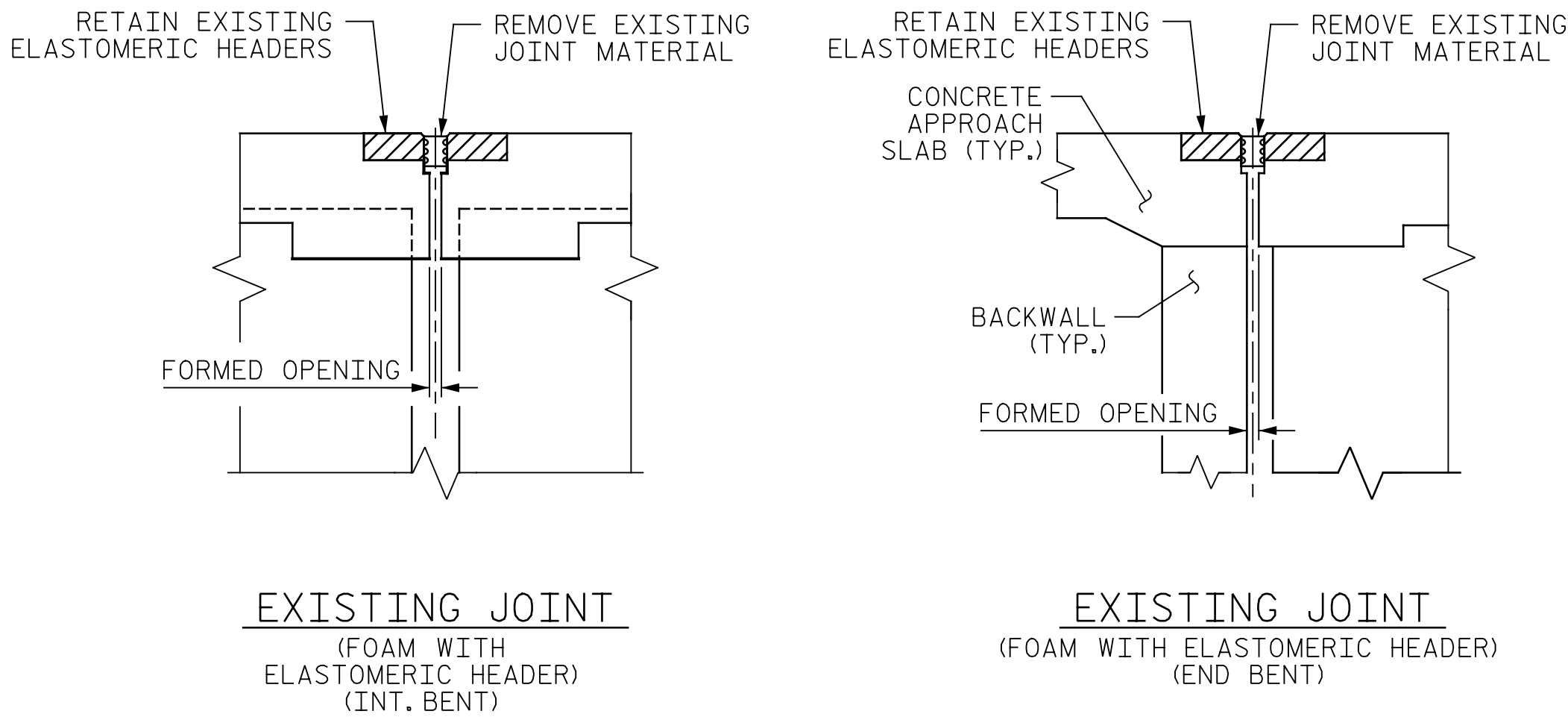
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

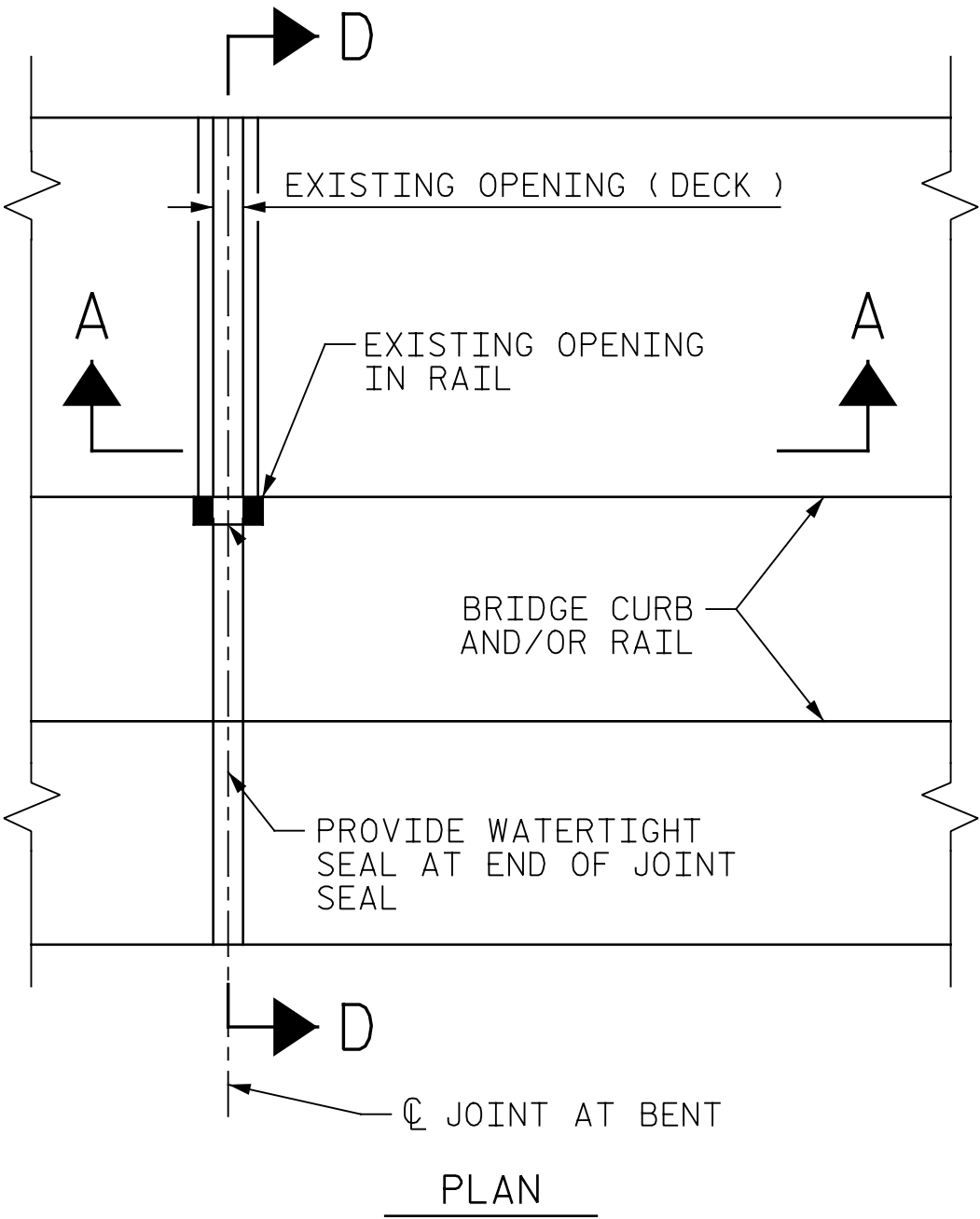
REVISIONS						SHEET NO. S-118
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

NOTES

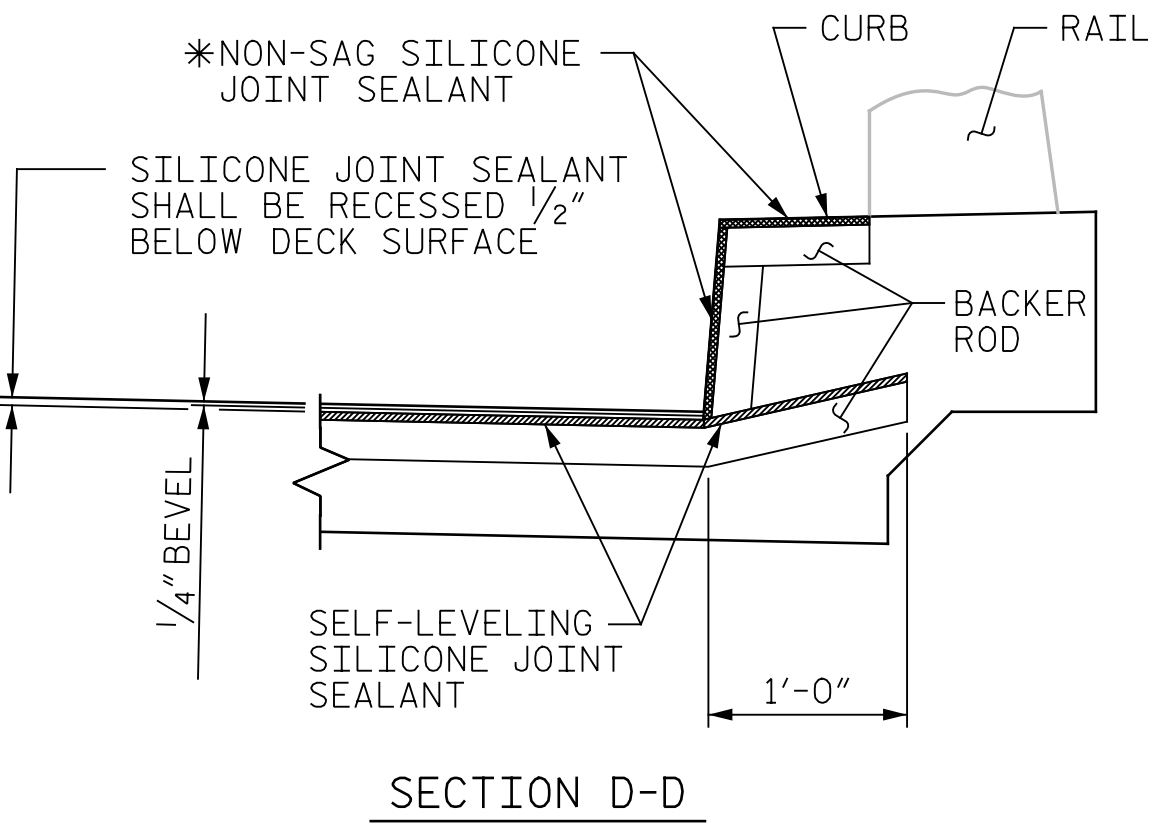
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



EXISTING JOINT TYPES

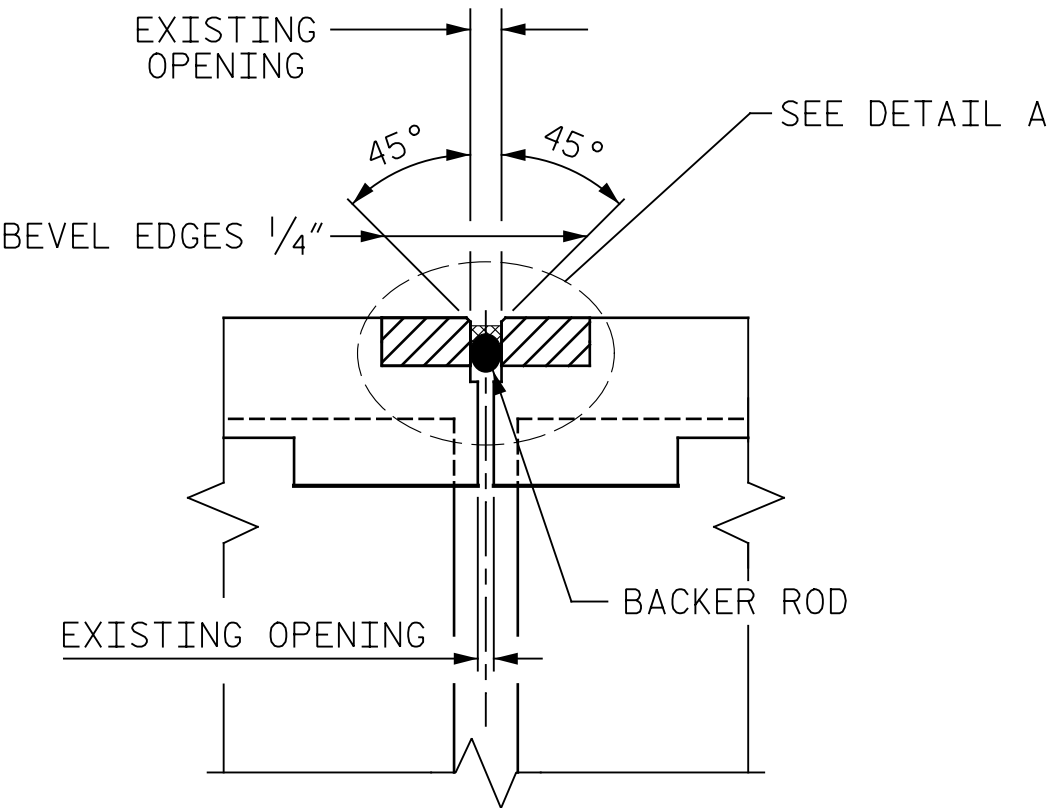


*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



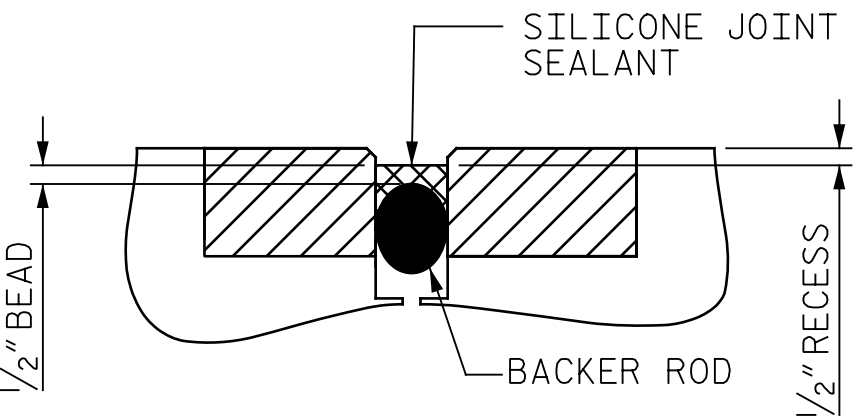
JOINT SEAL DETAILS AT BENT

	SILICONE JOINT SEAL (LF)					
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	BENT 4	EB 2
490106	34.8	34.8	-	-	-	34.8
490211	27.0	-	-	-	-	27.0



SECTION A-A
PROPOSED JOINT

(INTERIOR BENT SHOWN, END BENTS ARE SIMILIAR)



PROJECT NO. 14BPR.3.1
JACKSON COUNTY
BRIDGE NO. 106, 211



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL
FOR SILICONE
JOINT SEAL

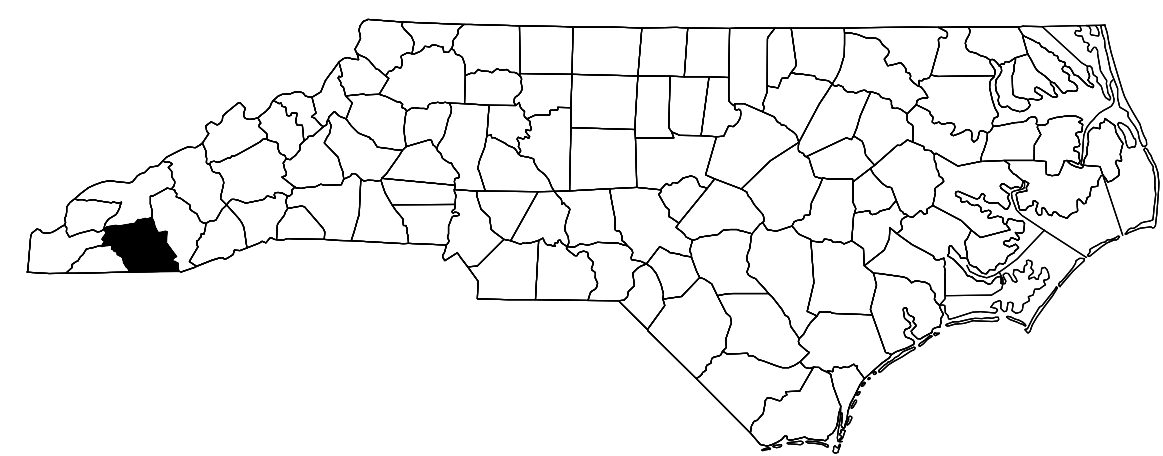
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

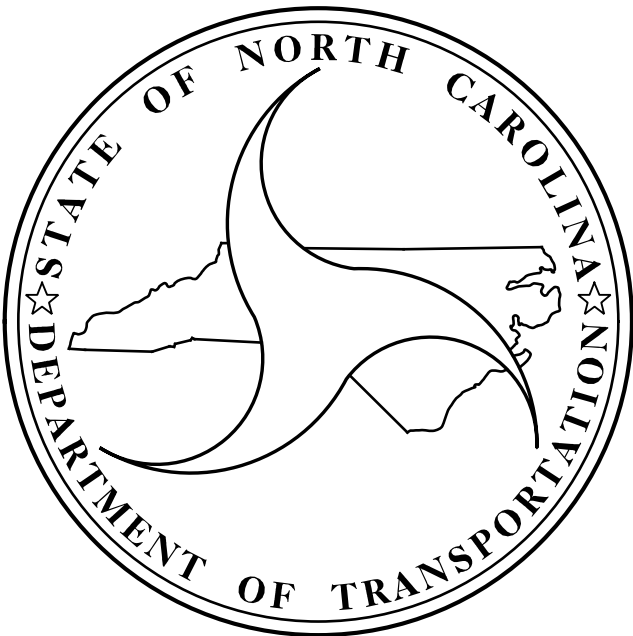
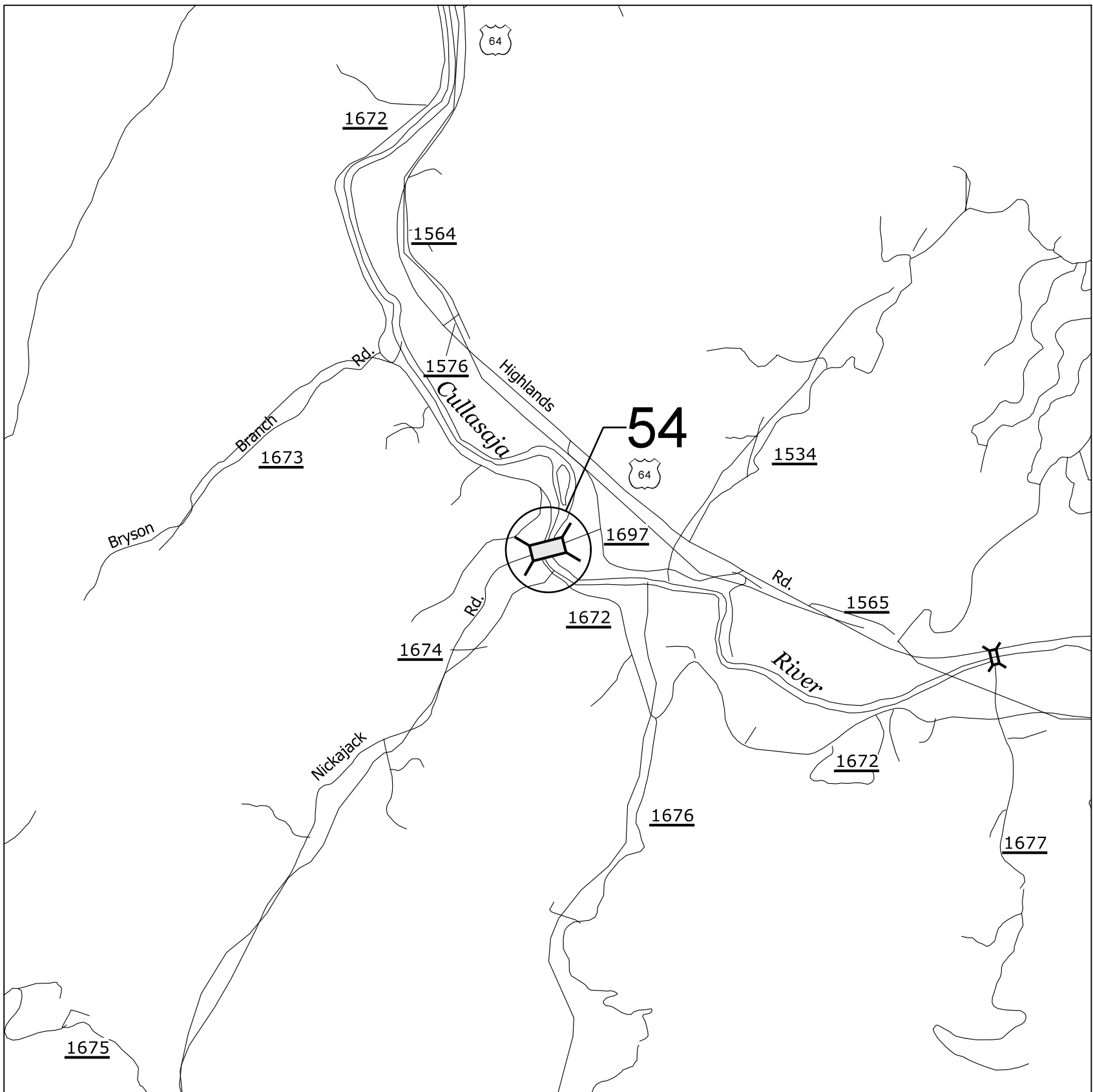
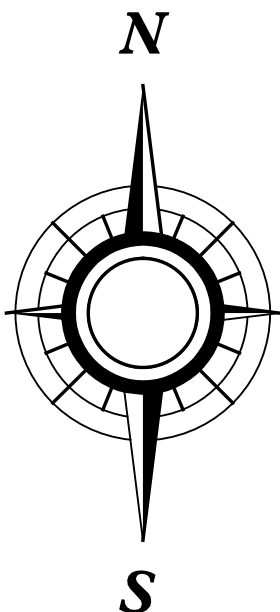
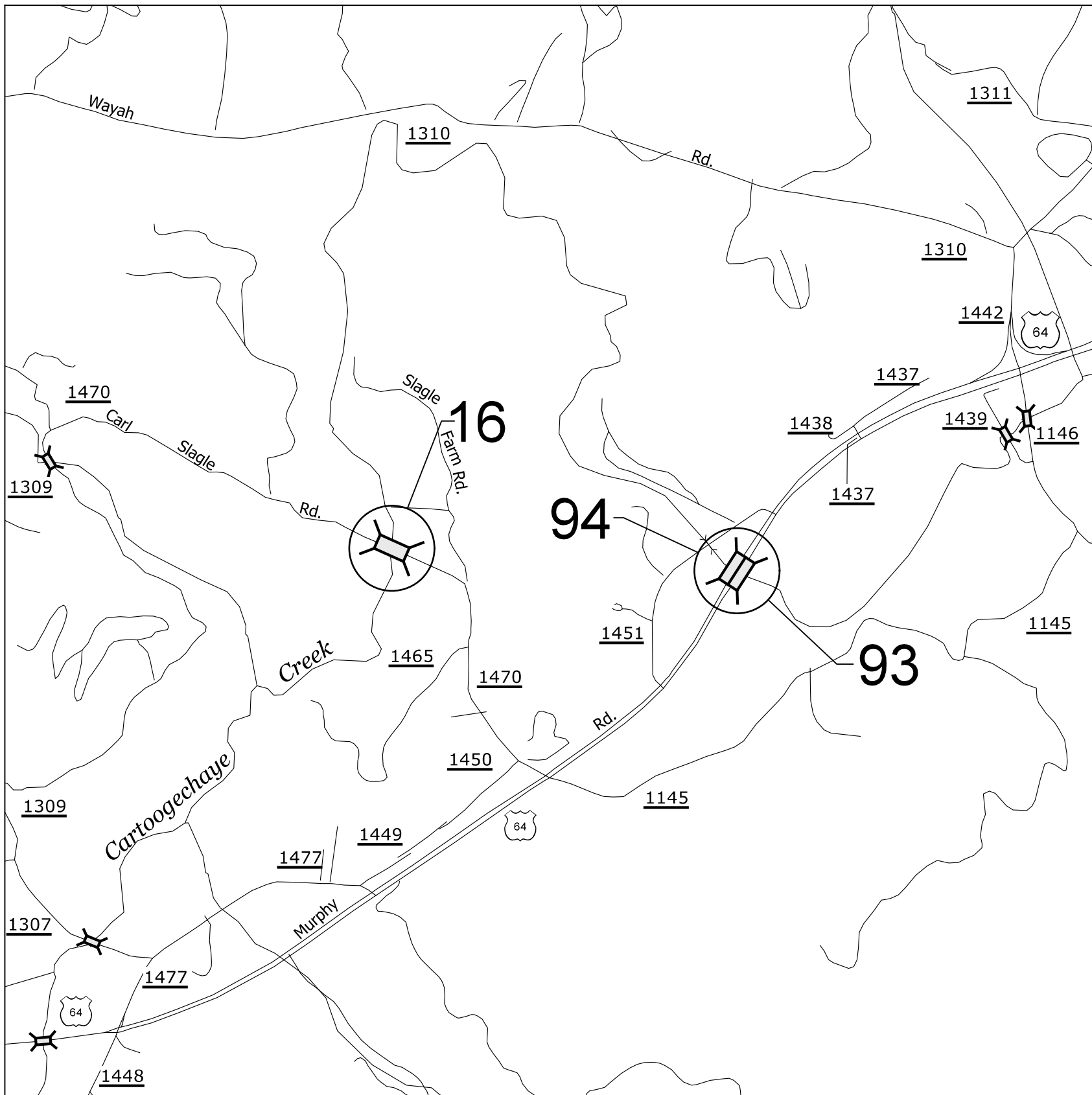
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-120

MACON COUNTY

LOCATION: **MACON COUNTY:**

BRIDGE #016 ON SR1470 OVER CARTOOGECHAYE CREEK
BRIDGE #054 ON SR1674 OVER CULLASAJA RIVER
BRIDGE #093 ON US64 EBL OVER CARTOOGECHAYE CREEK
BRIDGE #094 ON US64 WBL OVER CARTOOGECHAYE CREEK

TYPE OF WORK: **BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS**



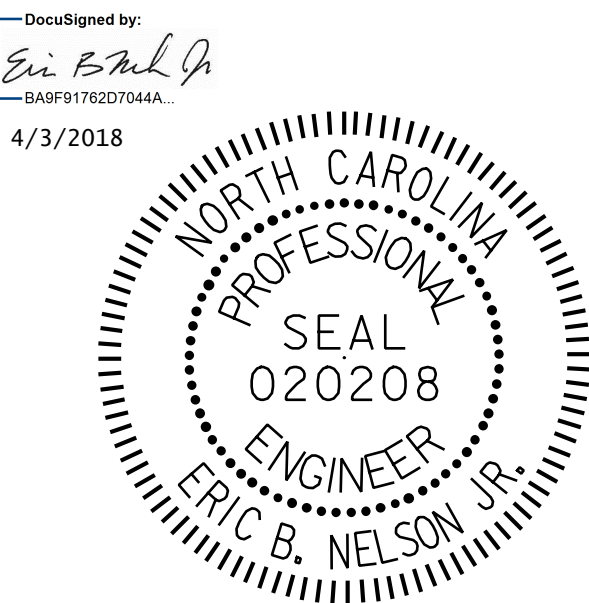
DESIGN DATA
MACON COUNTY
#016 ADT 2012 = 290
#054 ADT 2013 = 440
#093 ADT 2015 = 3,400
#094 ADT 2015 = 3,400

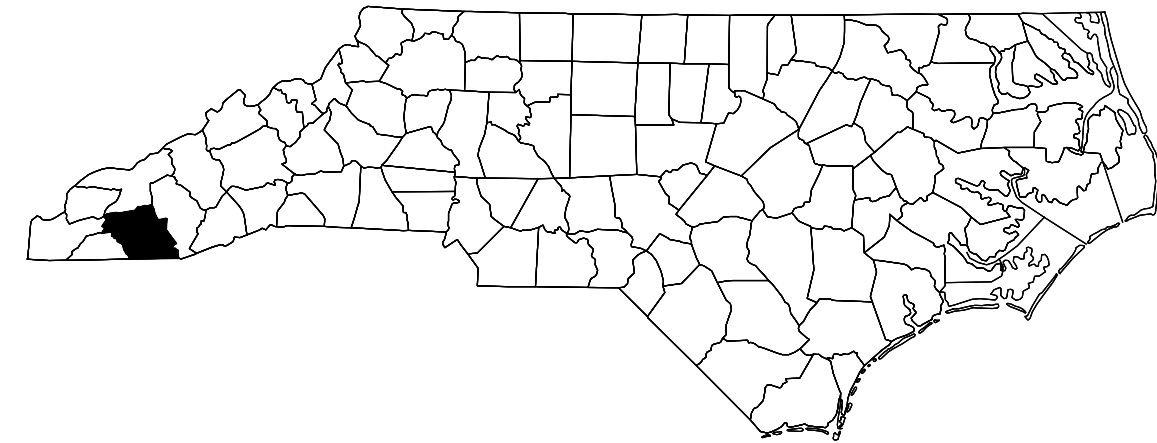
PROJECT LENGTH
MACON COUNTY
#016 = 0.030 MILE
#054 = 0.023 MILE
#093 = 0.034 MILE
#094 = 0.034 MILE

PLANS PREPARED BY:

 **Gannett Fleming**
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-121

MACON COUNTY

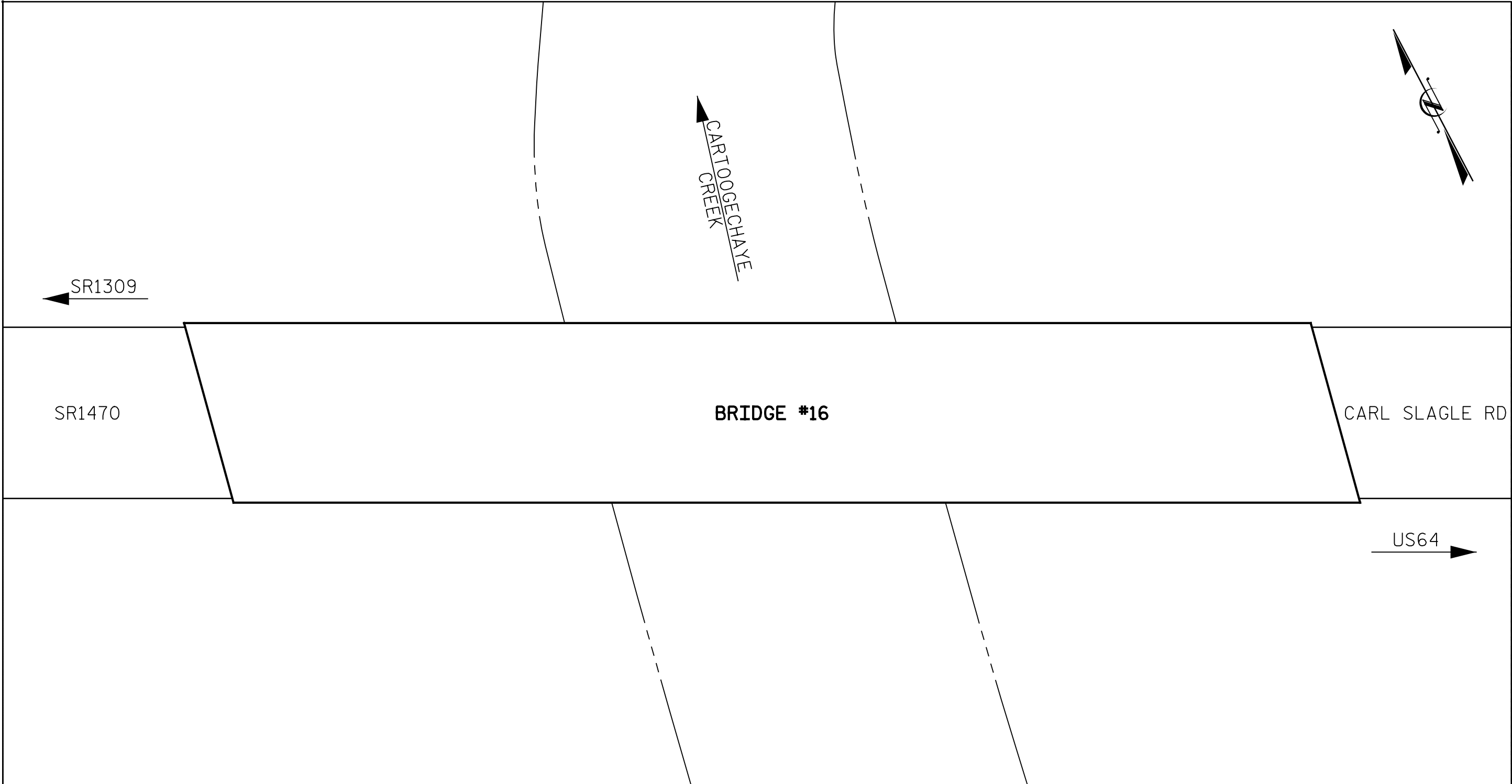
LOCATION: MACON COUNTY:

BRIDGE #016 ON SR1470 OVER CARTOOGECHAYE CREEK
BRIDGE #054 ON SR1674 OVER CULLASAJA RIVER
BRIDGE #093 ON US64 EBL OVER CARTOOGECHAYE CREEK
BRIDGE #094 ON US64 WBL OVER CARTOOGECHAYE CREEK

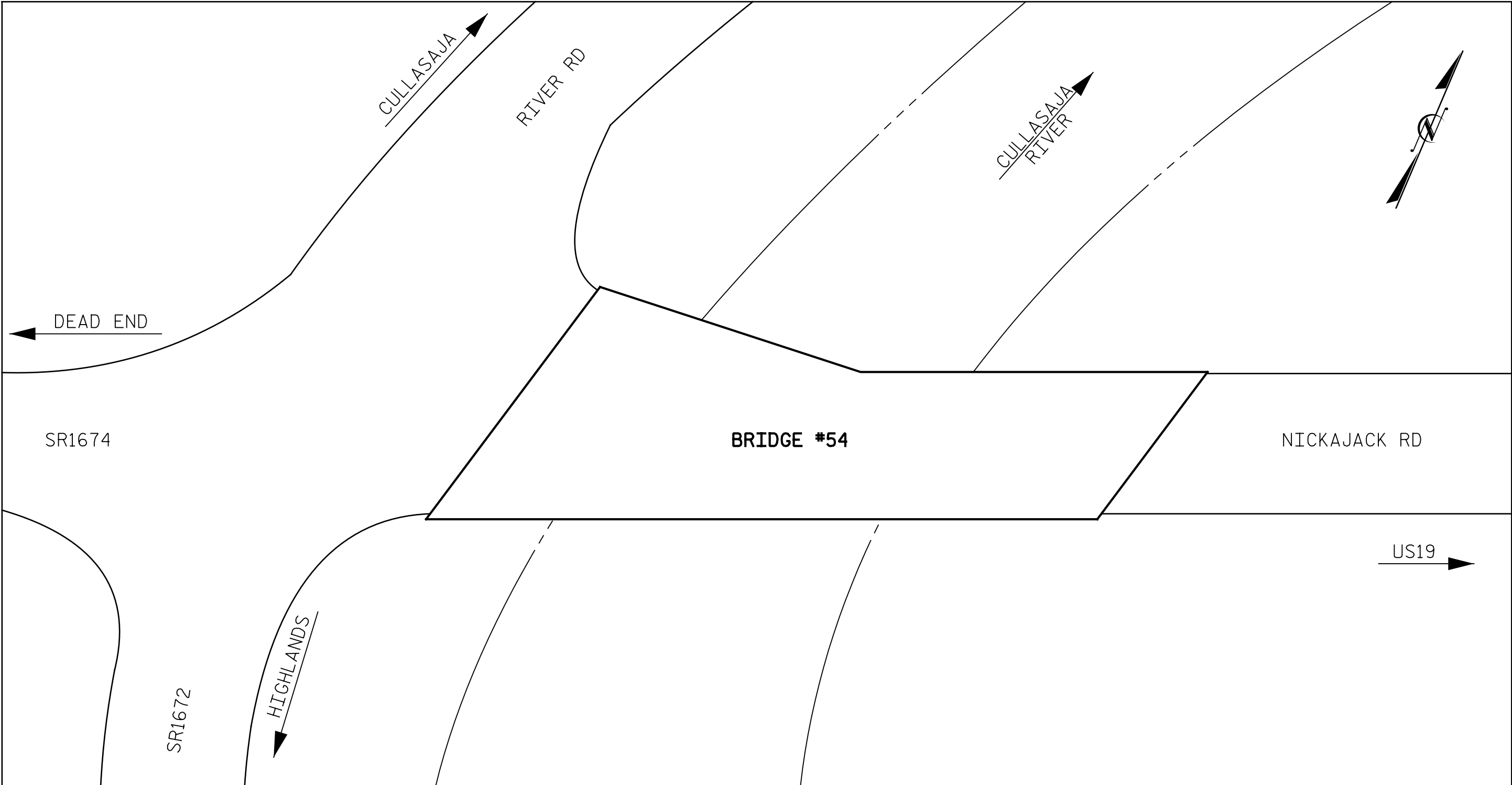
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

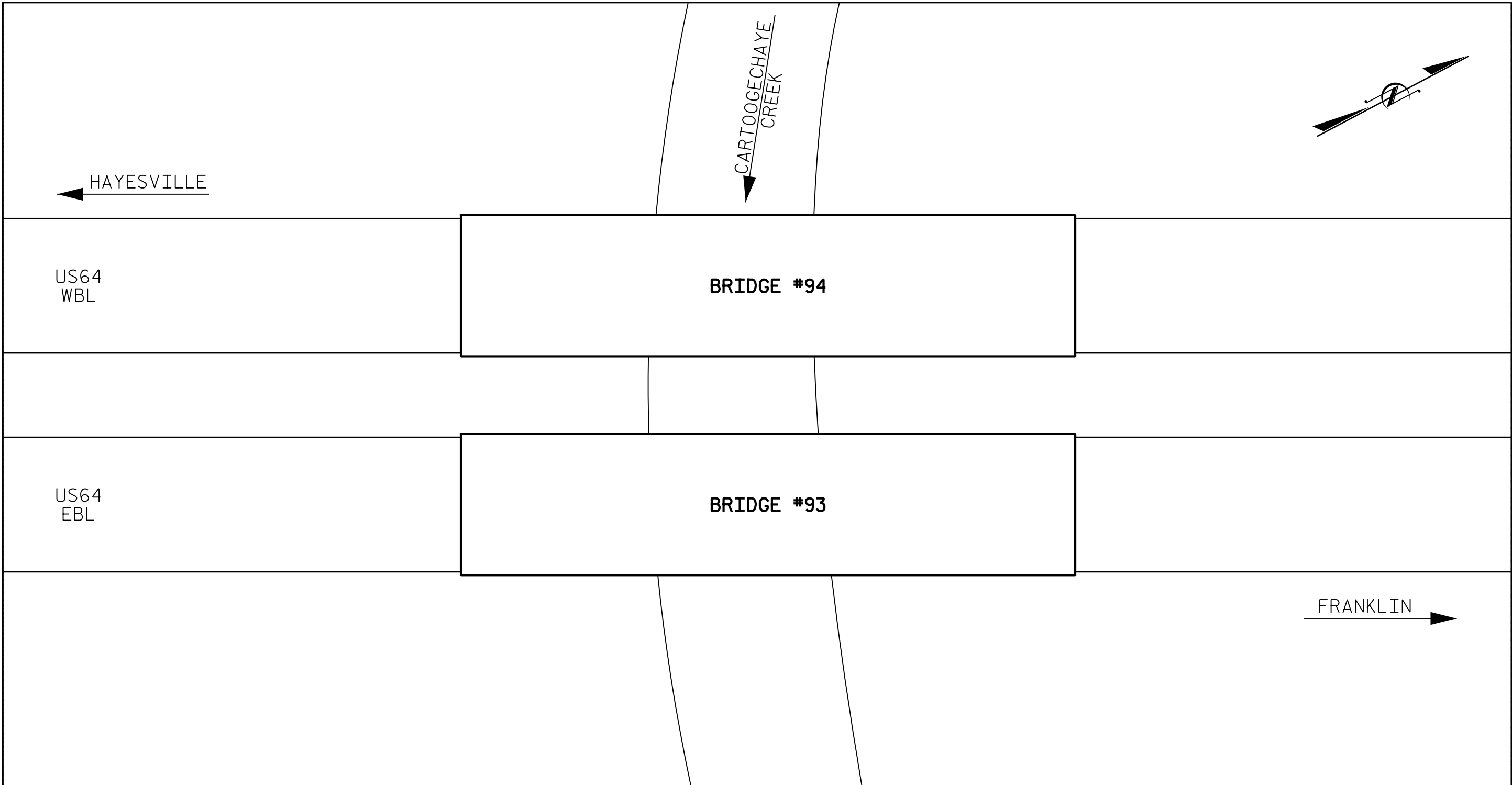
SHEET NO.	DESCRIPTION
S-120	TITLE SHEET
S-121	INDEX OF SHEETS
S-122 THRU S-123	STRUCTURAL PLANS – JOINT REPLACEMENTS



BRIDGE #16



BRIDGE #54



BRIDGE #93 AND #94

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR
MACON COUNTY

	SILICONE JOINT SEALANT
	LN. FT.
550016	55.8
550054	129.0
550093	86.0
550094	86.0
TOTAL	356.8

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

PROJECT NO. 14BPR.3.1
MACON COUNTY



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL
& BRIDGE LOCATION
SKETCHES

REVISIONS						SHEET NO. S-122
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

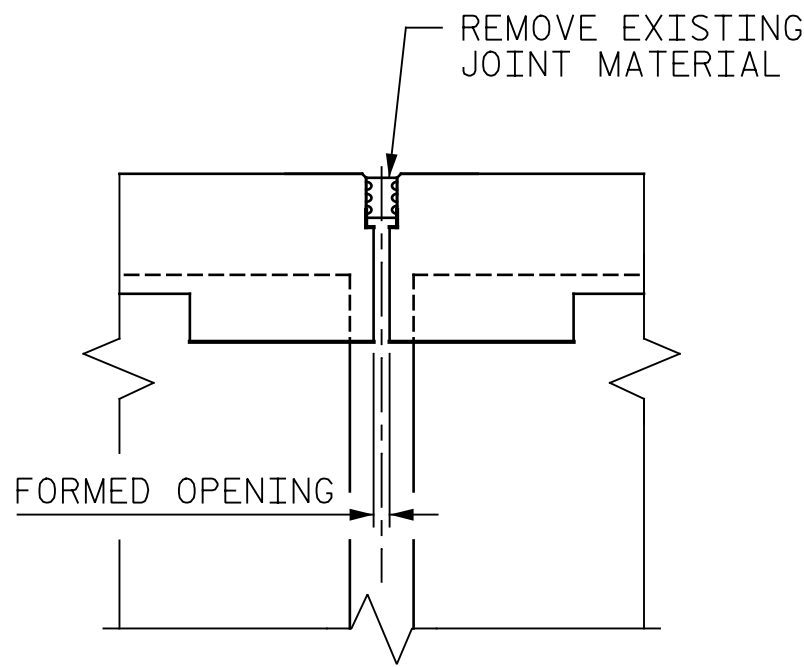
PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
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(919) 420-7660
NC Lic. No. F-0270

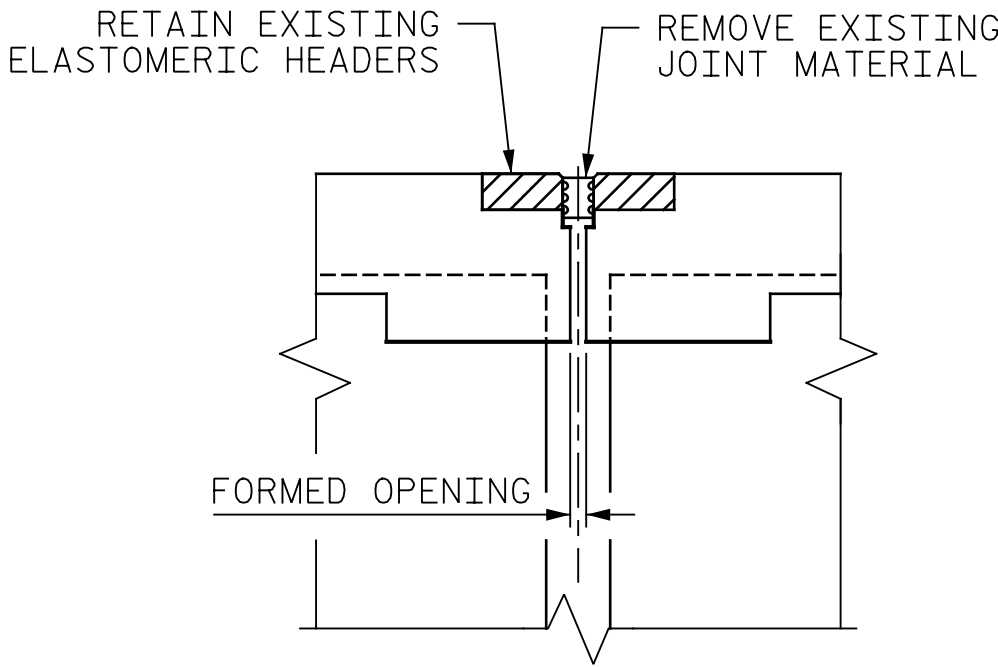
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES

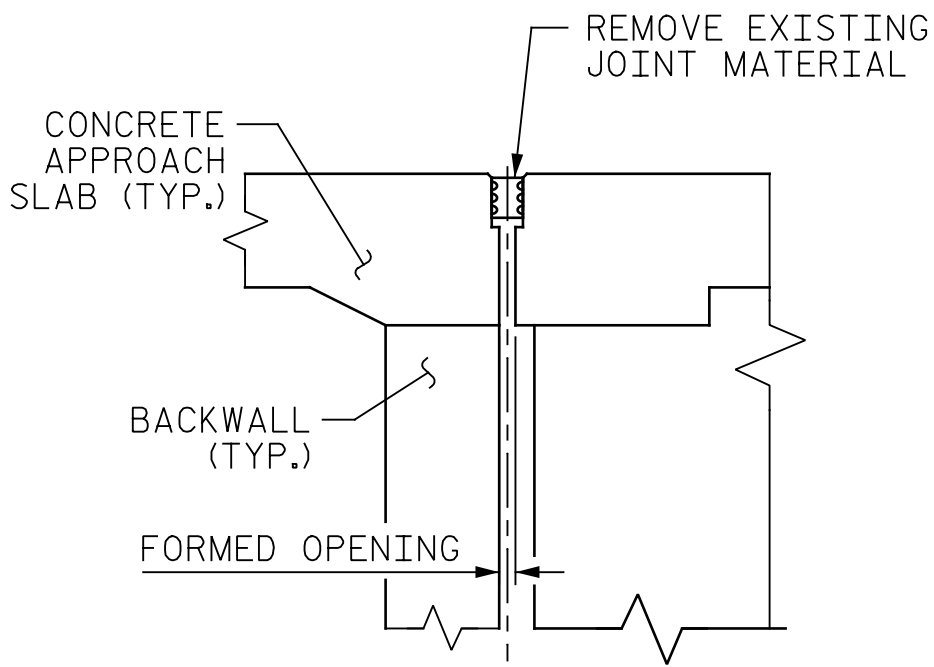
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



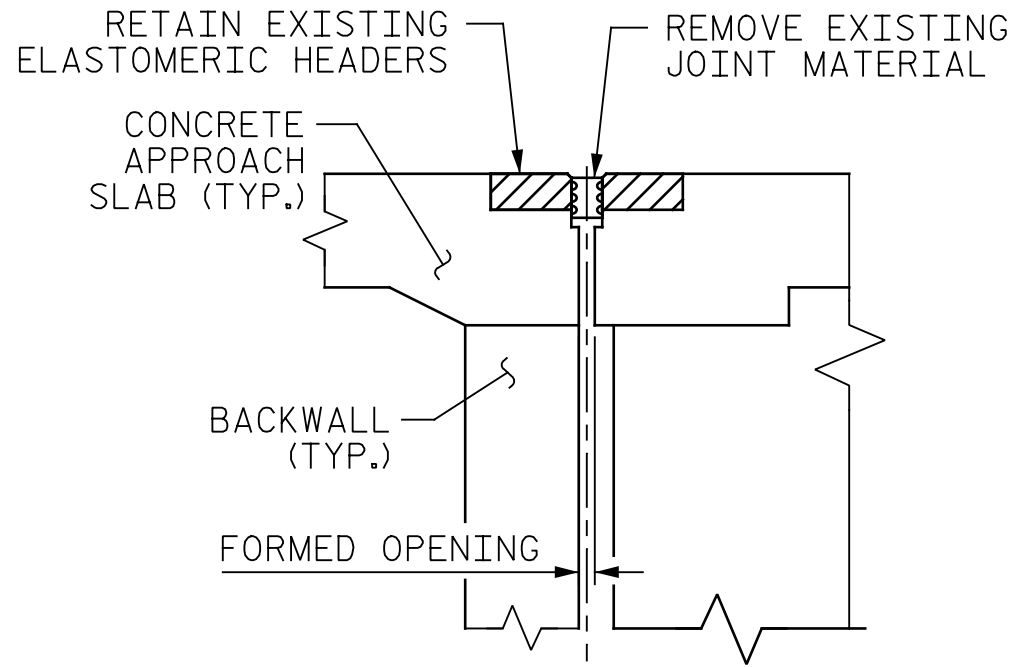
EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)



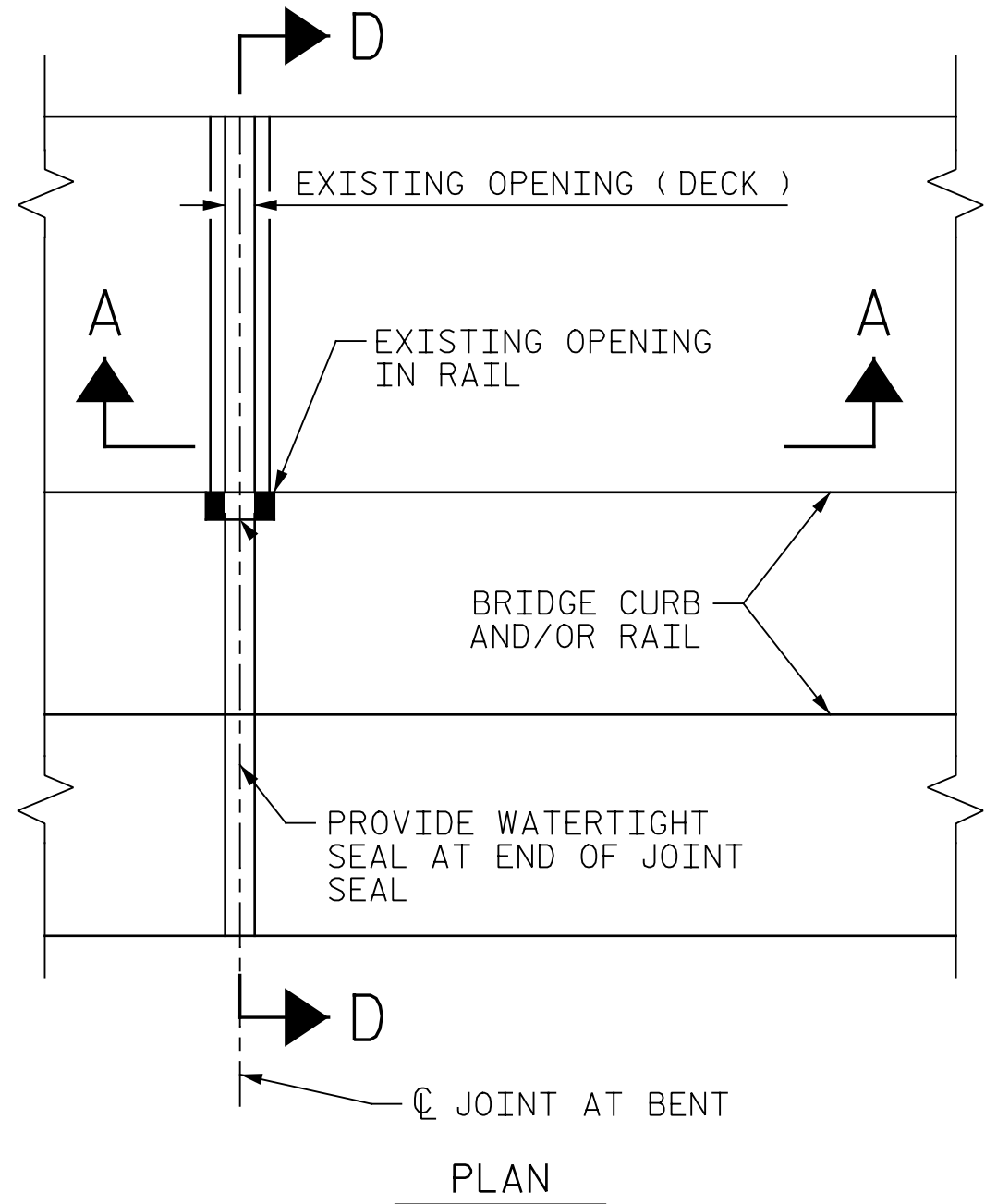
EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)



EXISTING JOINT
(FOAM WITH NO HEADER) (END BENT)



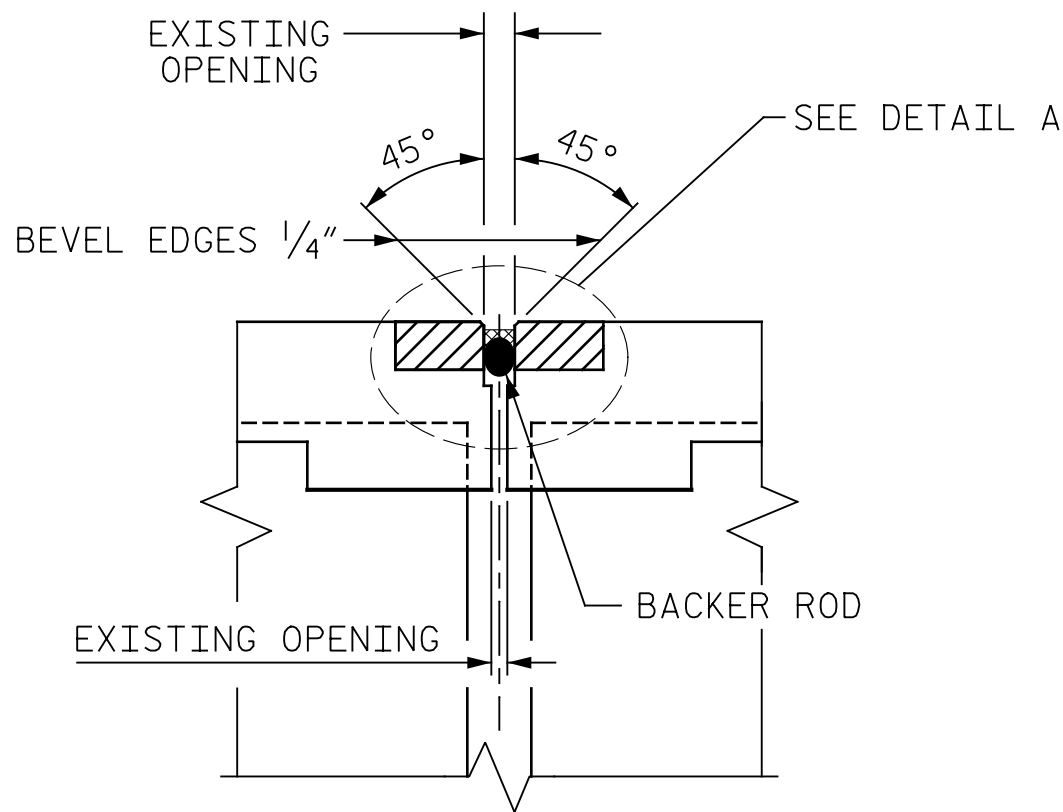
EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER) (END BENT)



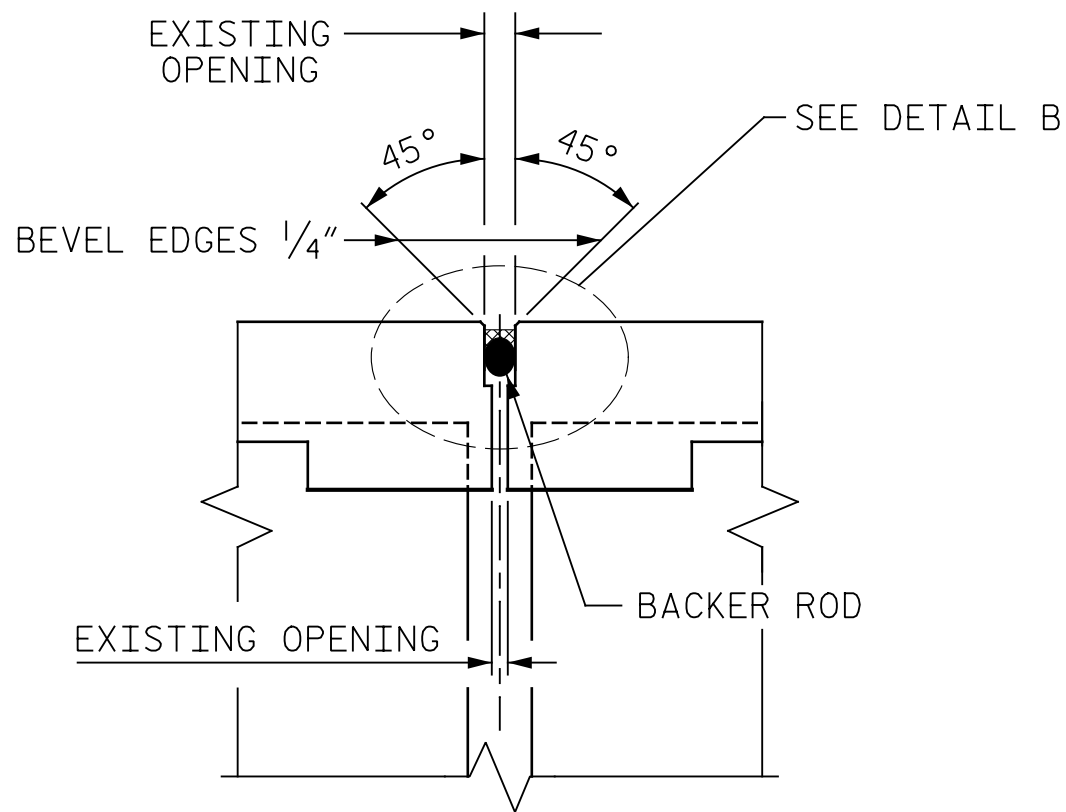
*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

	SILICONE JOINT SEAL (LF)		
BRIDGE NO.	EB 1	BENT 1	EB 2
550016	27.9	-	27.9
550054	43.0	43.0	43.0
550093	43.0	-	43.0
550094	43.0	-	43.0

EXISTING JOINT TYPES



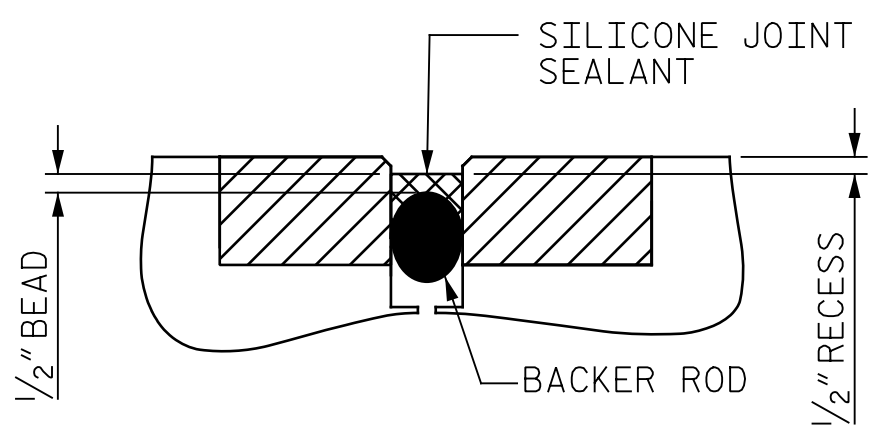
PROPOSED SILICONE JOINT SEAL



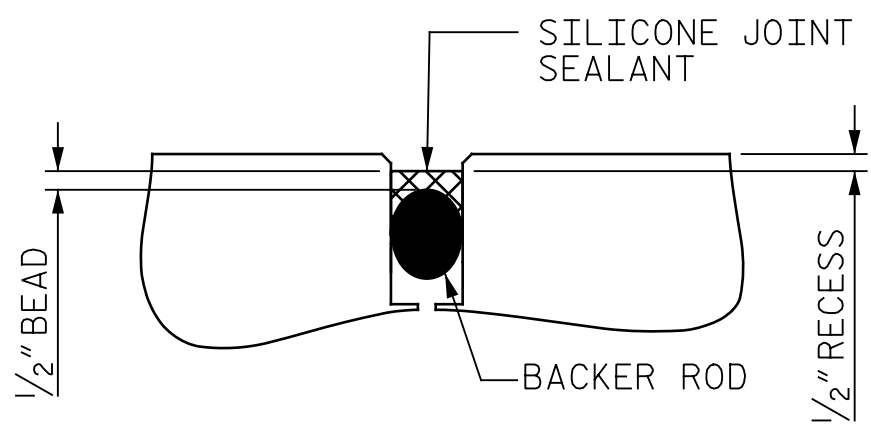
PROPOSED SILICONE JOINT SEAL

SECTION A-A
PROPOSED JOINT

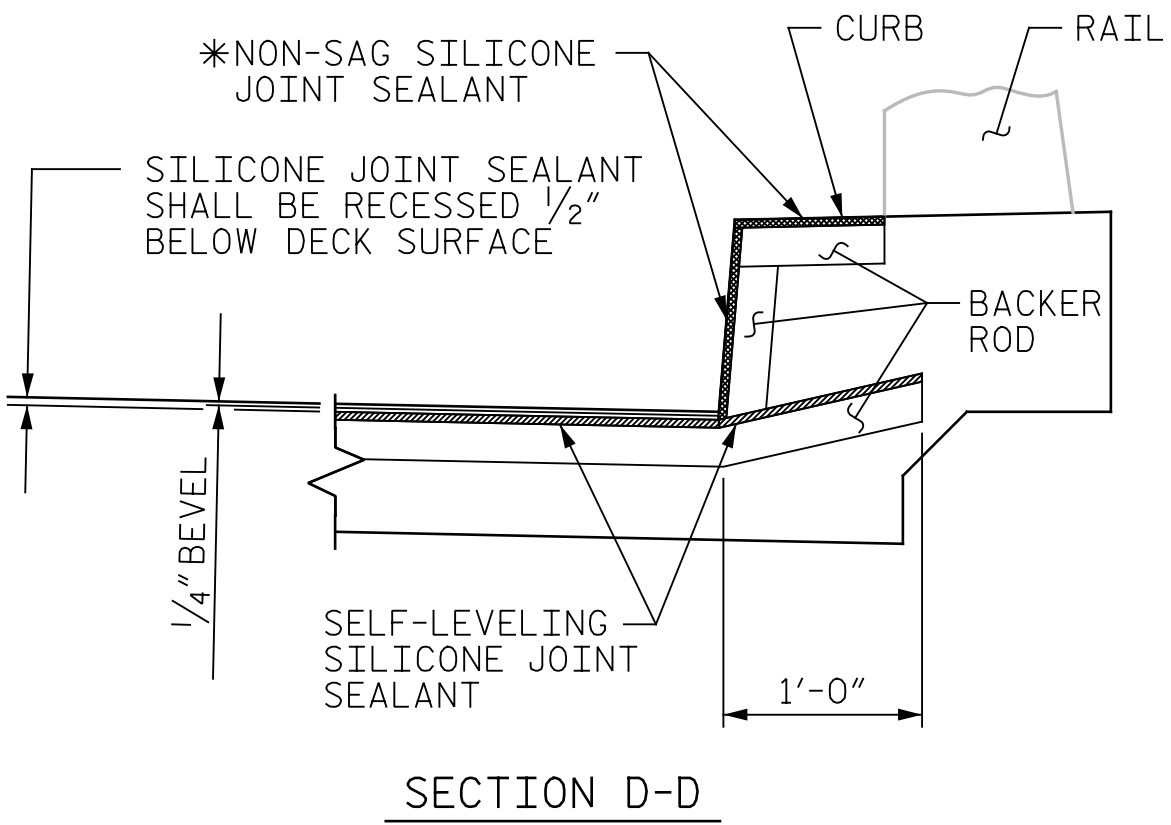
(INTERIOR BENT SHOWN,
END BENTS ARE SIMILIAR)



DETAIL A



DETAIL B



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
MACON COUNTY
BRIDGE NO. 16, 54, 93, 94



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

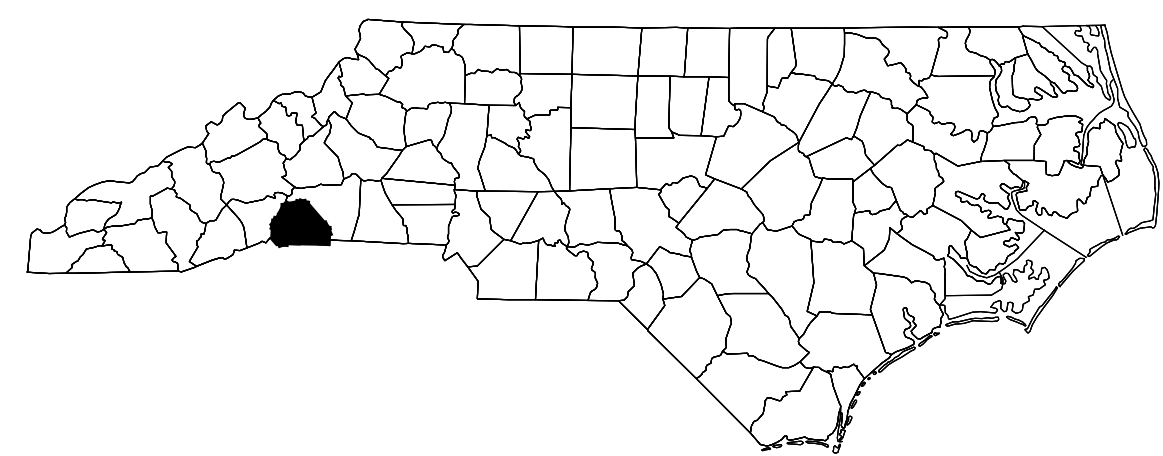
JOINT DETAIL
FOR SILICONE
JOINT SEAL

REVISIONS						SHEET NO. S-123
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

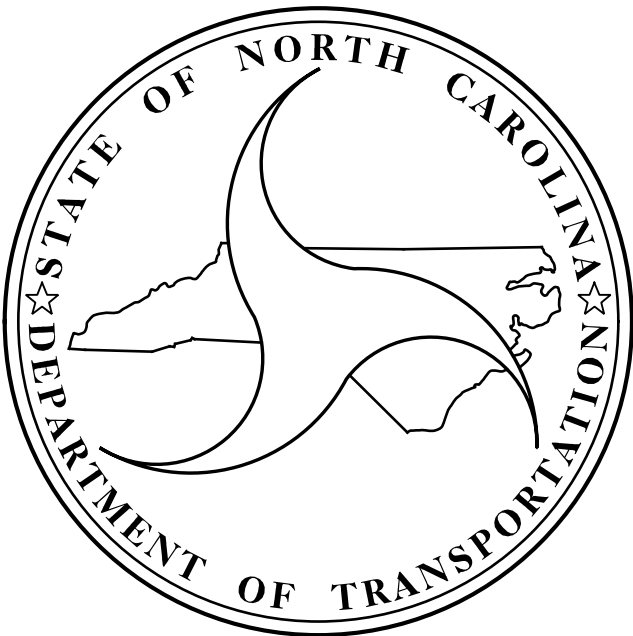
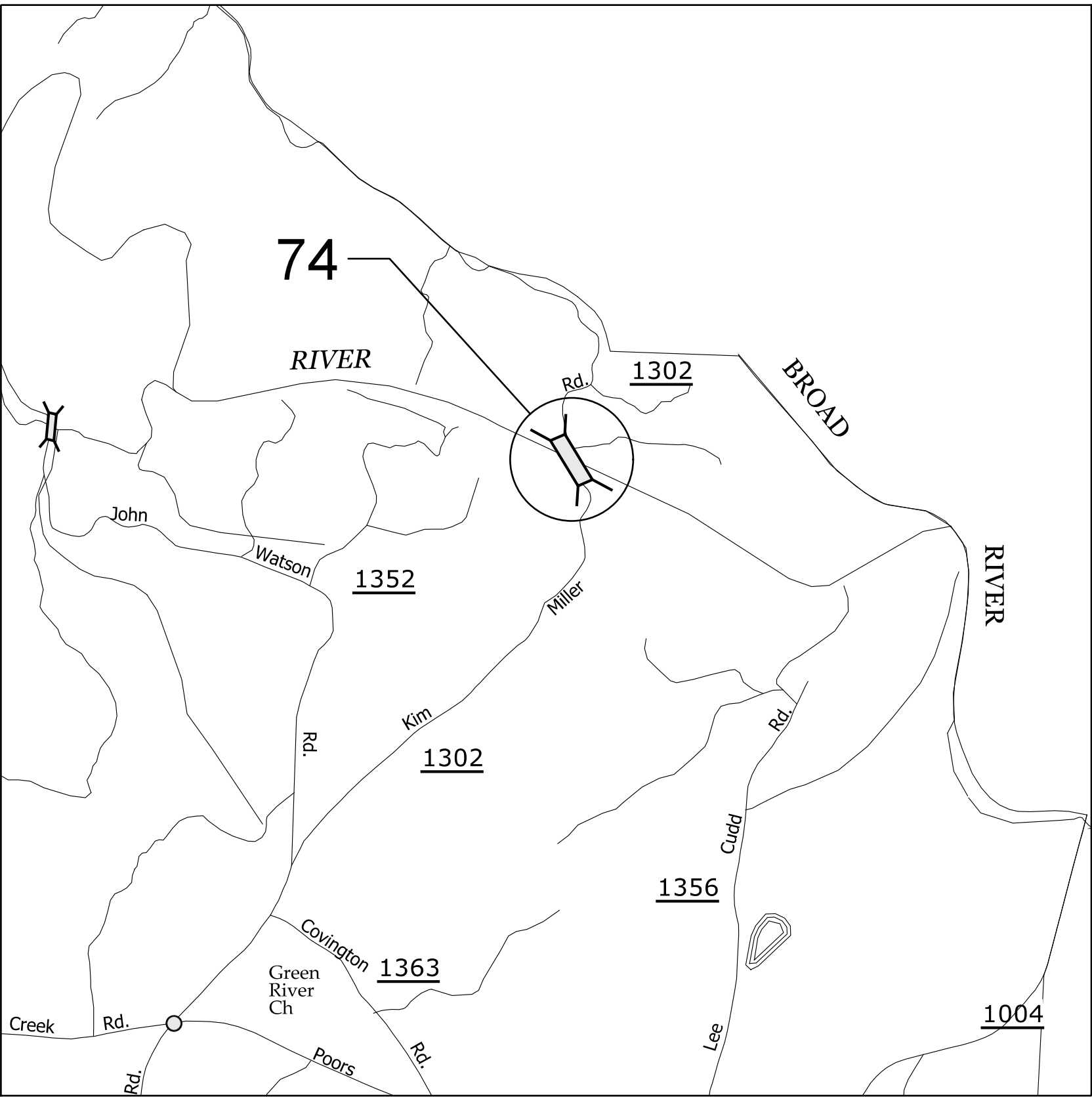
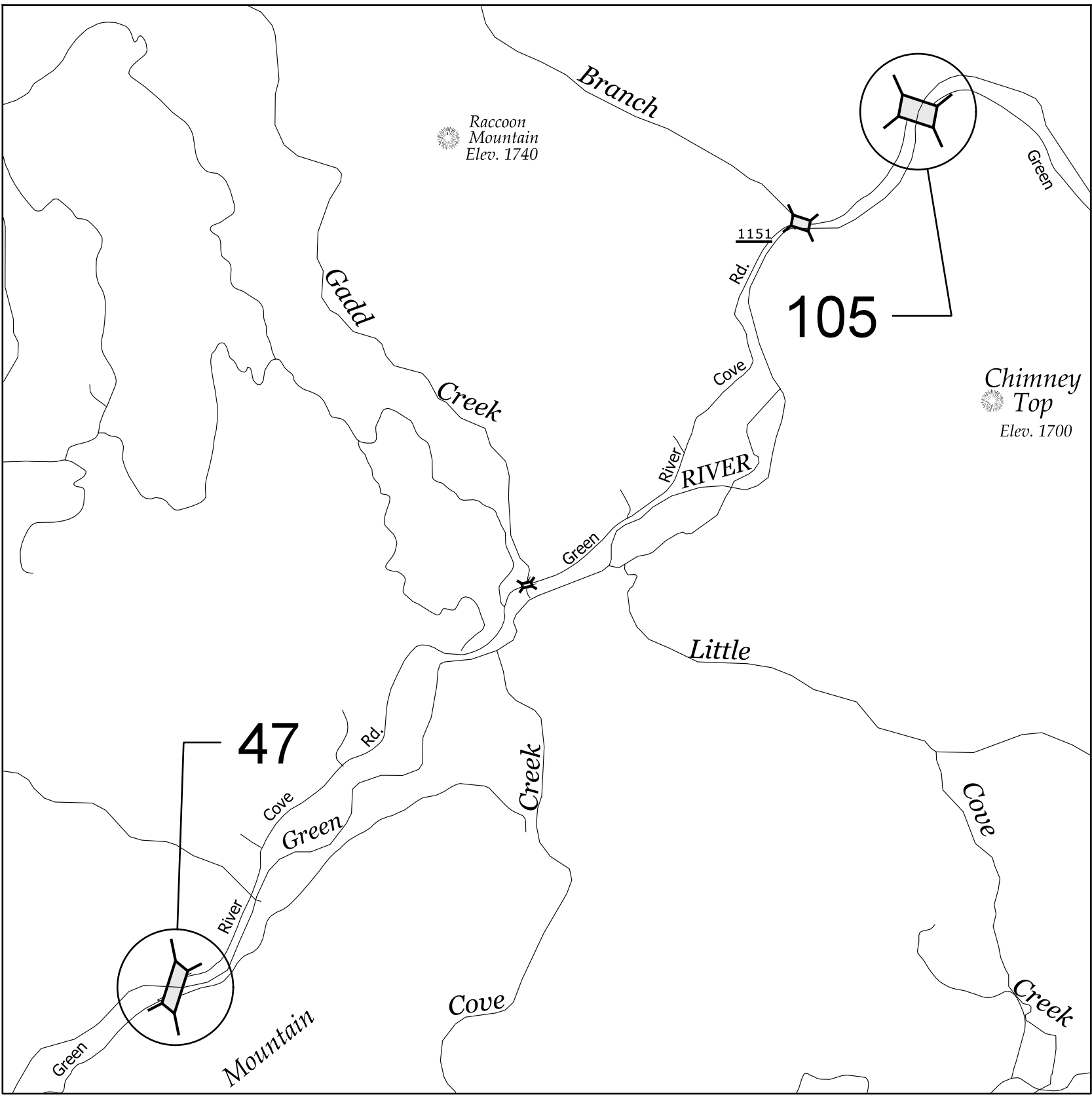
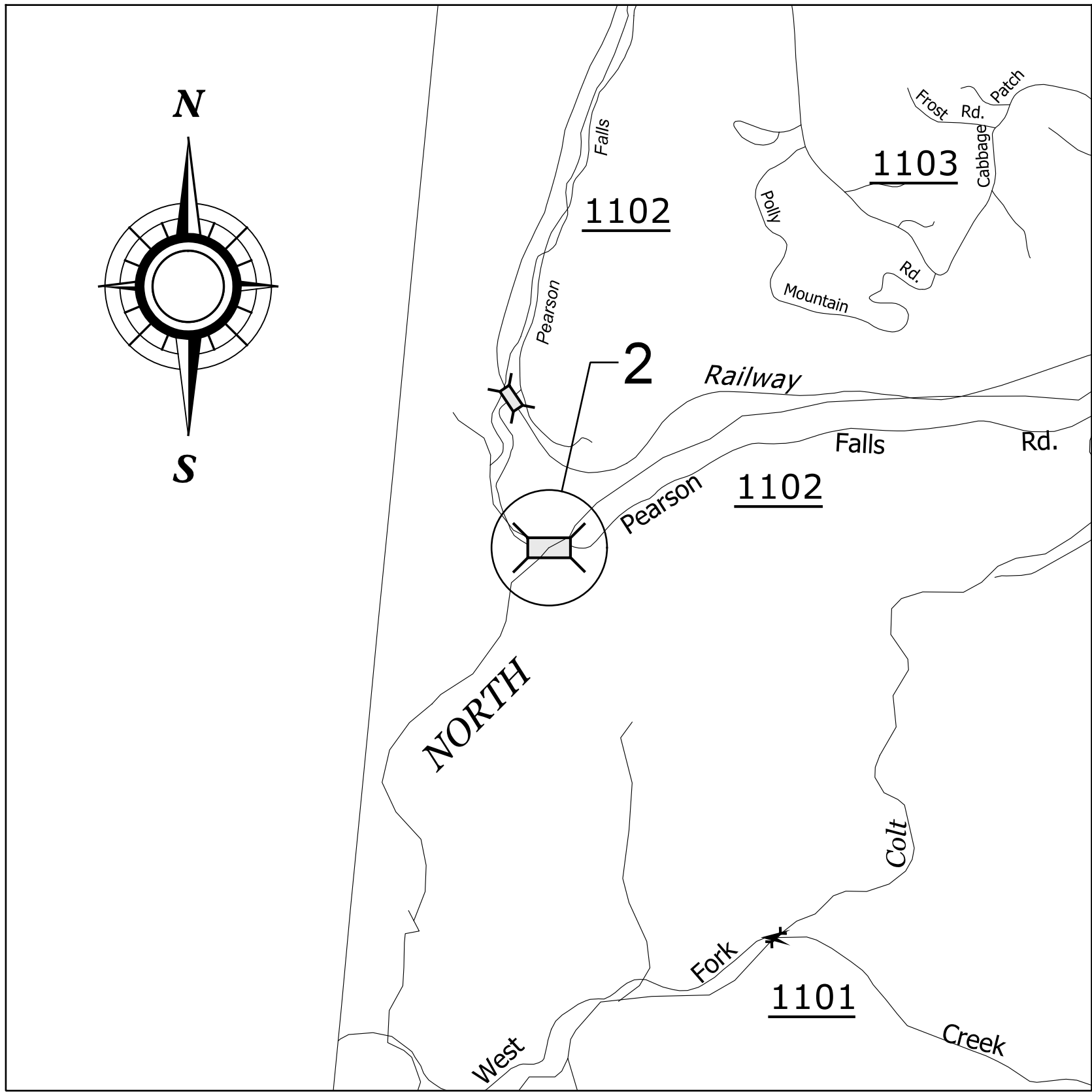
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-124

POLK COUNTY

LOCATION: POLK COUNTY:

BRIDGE #002 ON SR1102 OVER NORTH PACOLET RIVER
BRIDGE #047 ON SR1151 OVER GREEN RIVER
BRIDGE #074 ON SR1302 OVER GREEN RIVER
BRIDGE #105 ON SR1151 OVER GREEN RIVER

TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS



DESIGN DATA
POLK COUNTY

#002	ADT 2012	=	230
#047	ADT 2013	=	400
#074	ADT 2015	=	160
#105	ADT 2015	=	120

PROJECT LENGTH
POLK COUNTY

#002	=	0.021	MILE
#047	=	0.032	MILE
#074	=	0.037	MILE
#105	=	0.035	MILE

PLANS PREPARED BY:



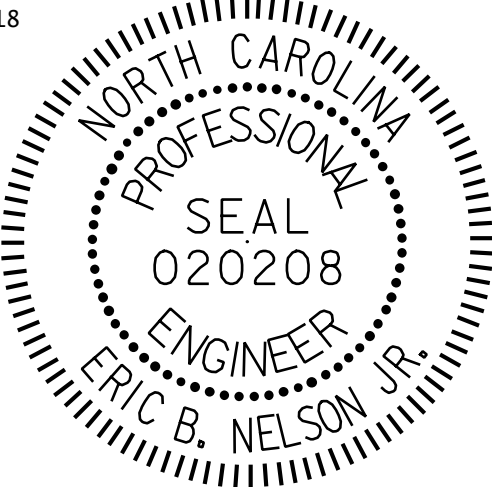
Gannett Fleming

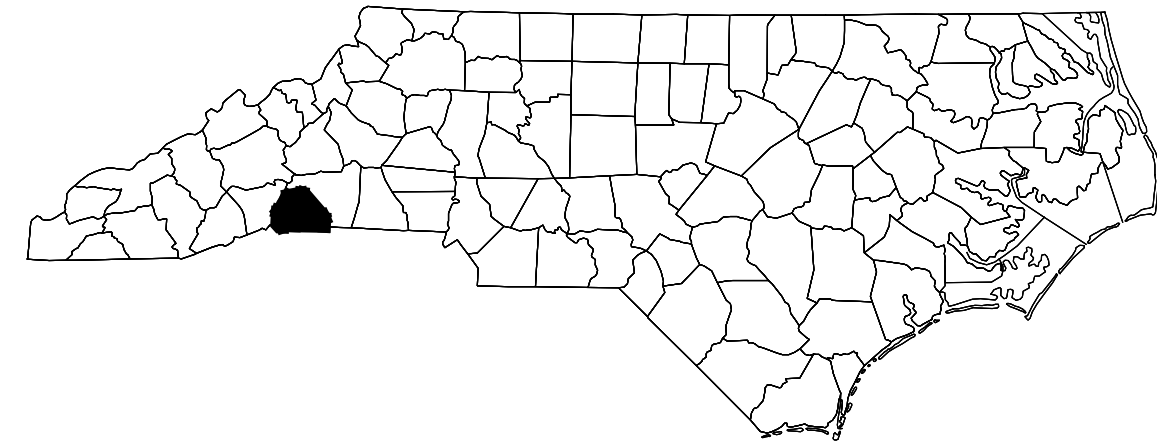
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660

NC Lic. No. F-0270

DocuSigned by:
Eric B. Nelson
4/3/2018





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-125

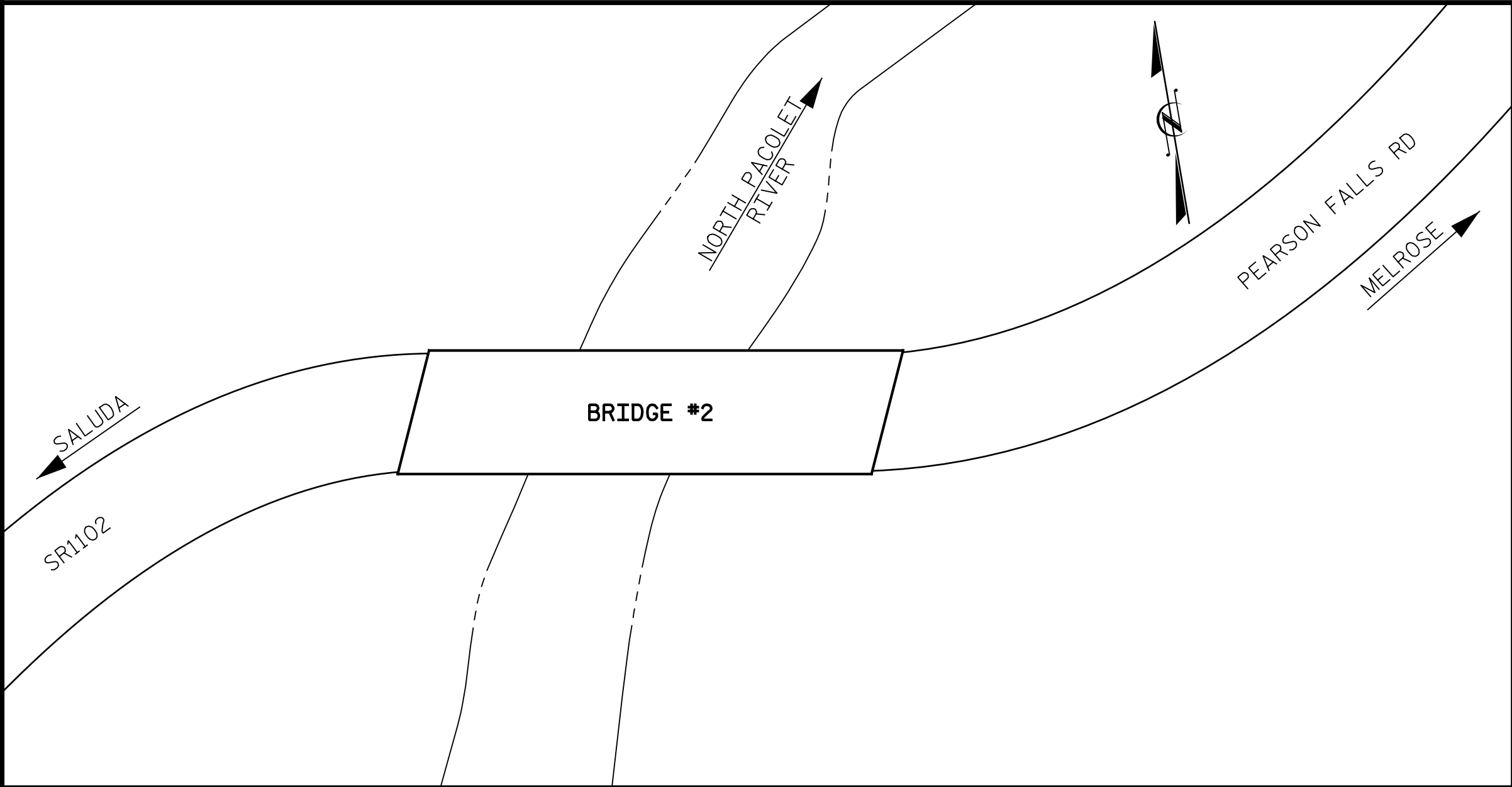
POLK COUNTY

LOCATION: POLK COUNTY:
BRIDGE #002 ON SR1102 OVER NORTH PACOLET RIVER
BRIDGE #047 ON SR1151 OVER GREEN RIVER
BRIDGE #074 ON SR1302 OVER GREEN RIVER
BRIDGE #105 ON SR1151 OVER GREEN RIVER

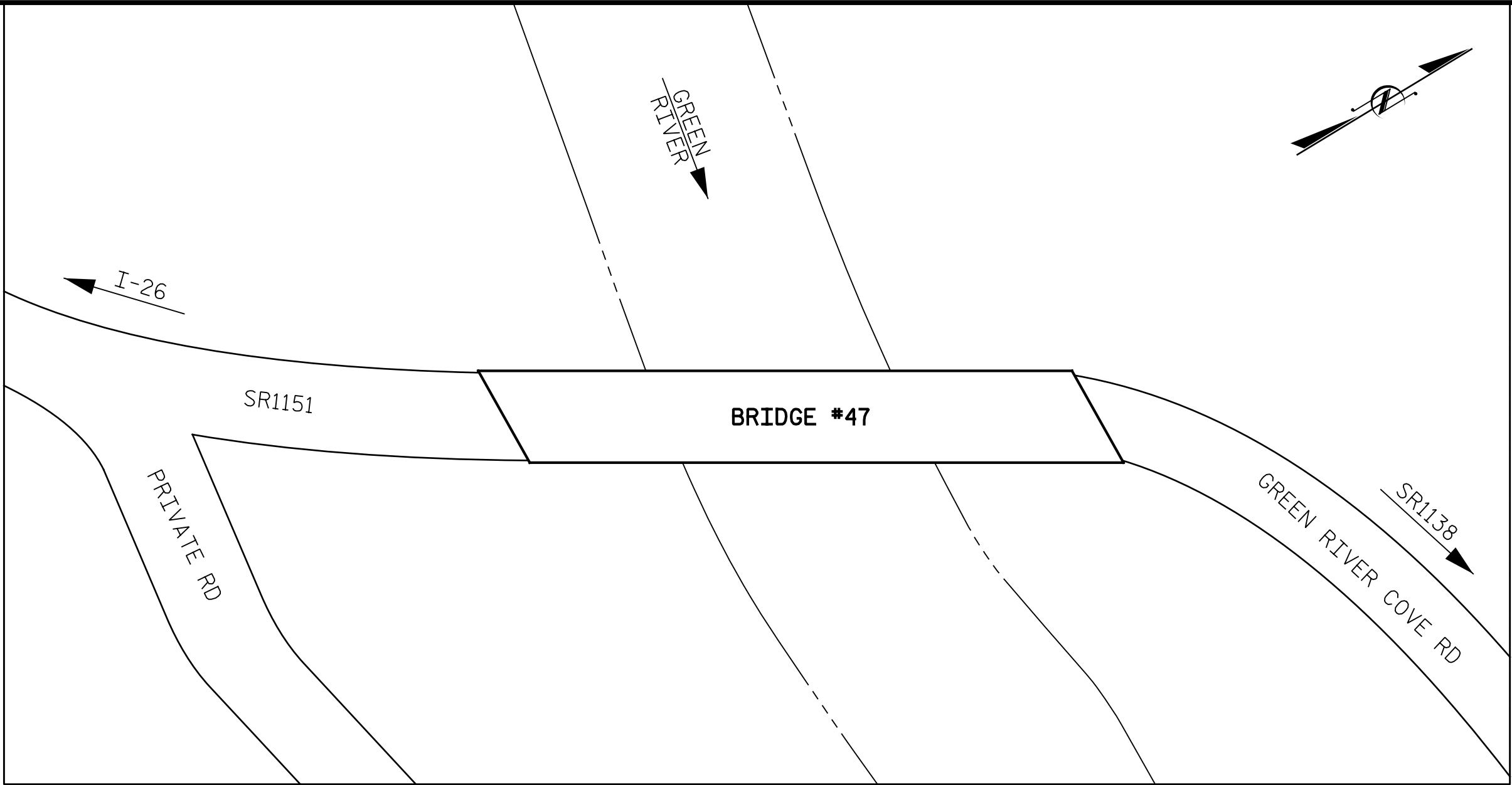
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

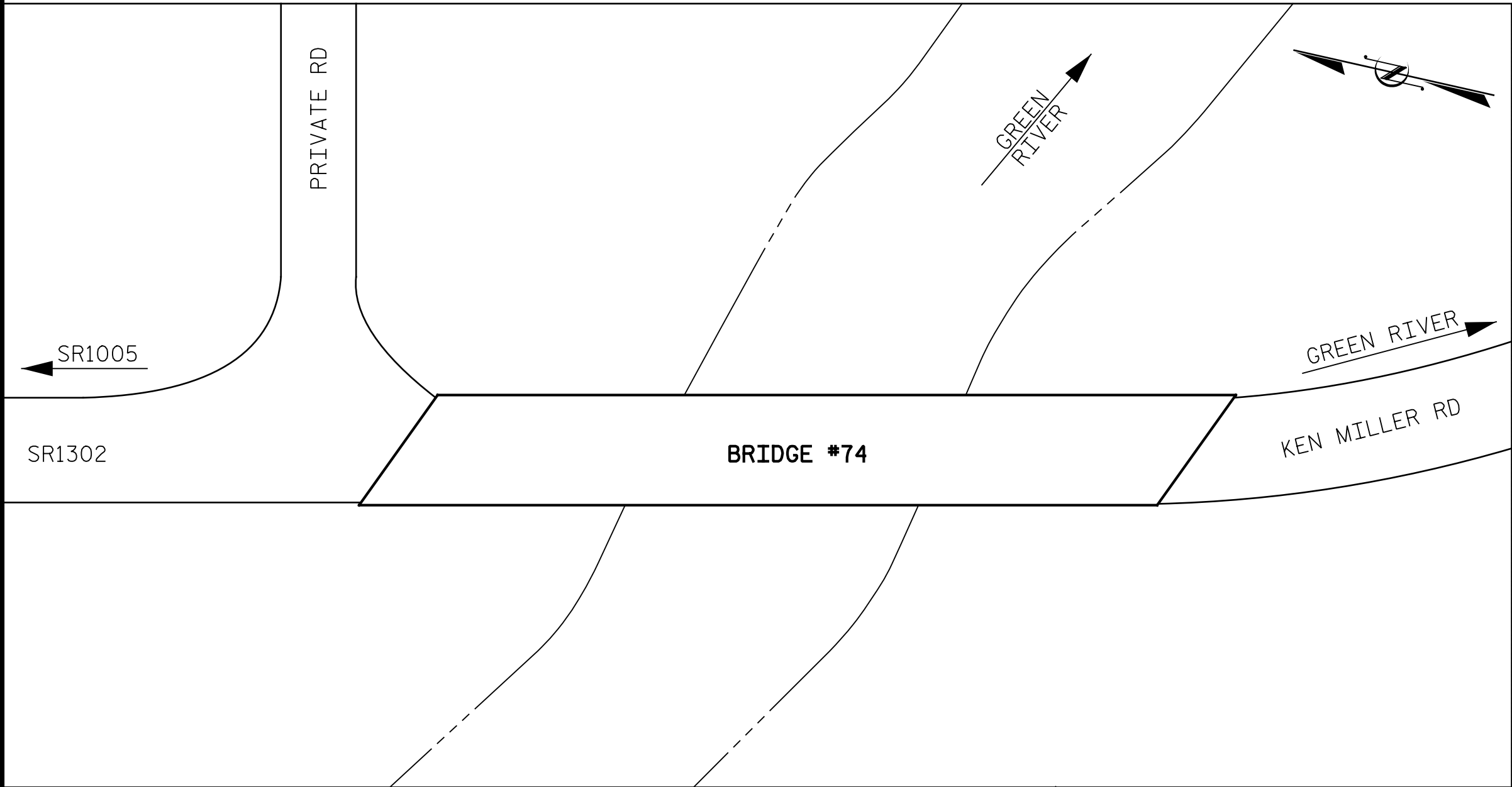
SHEET NO.	DESCRIPTION
S-124	TITLE SHEET
S-125	INDEX OF SHEETS
S-126 THRU S-128	STRUCTURAL PLANS – JOINT REPLACEMENTS



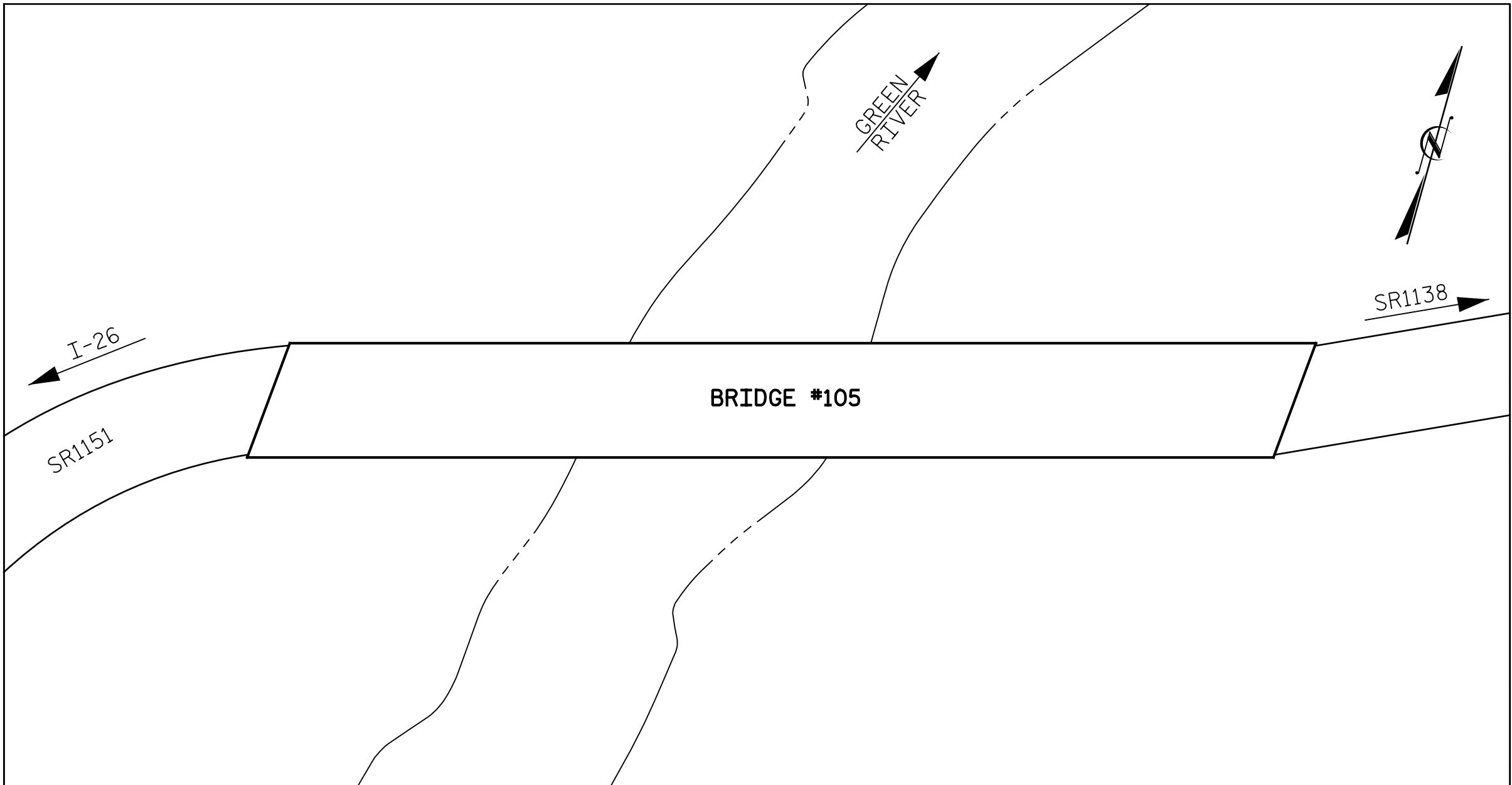
BRIDGE #2



BRIDGE #47



BRIDGE #74



BRIDGE #269

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

BILL OF MATERIAL FOR
POLK COUNTY

	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION
	LUMP SUM	LN. FT.	CU. FT.	CU. FT.	SQ. FT.
740002	LUMP SUM	59.8	-	-	-
740047	LUMP SUM	64.0	-	14.6	58.0
740074	LUMP SUM	60.4	-	13.6	54.4
740105	LUMP SUM	61.4	-	14.4	57.4
TOTAL	LUMP SUM	245.6	-	42.6	169.8

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
POLK COUNTY

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL
& BRIDGE LOCATION
SKETCHES



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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REVISIONS						SHEET NO. S-126
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

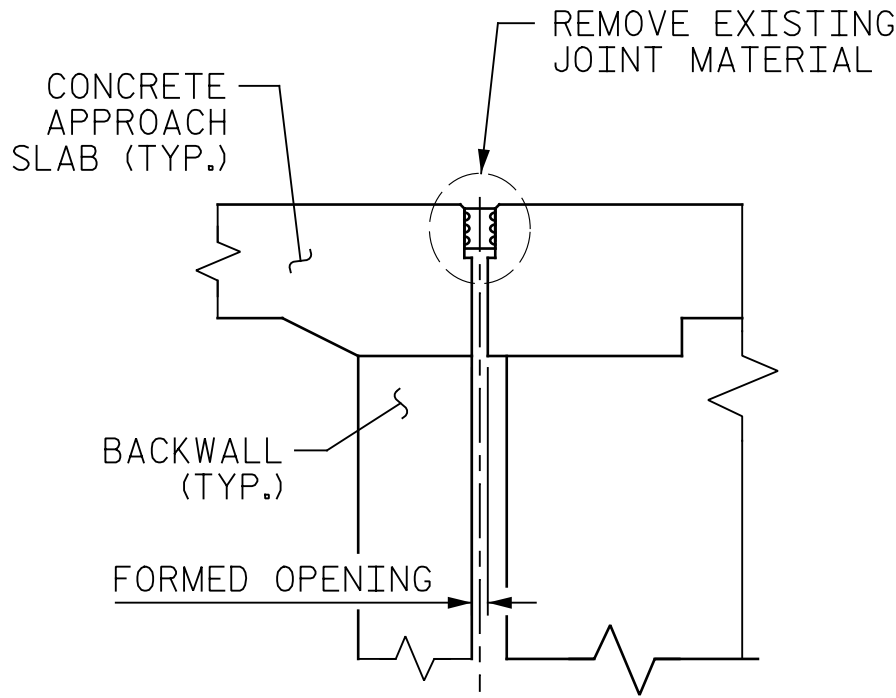
FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

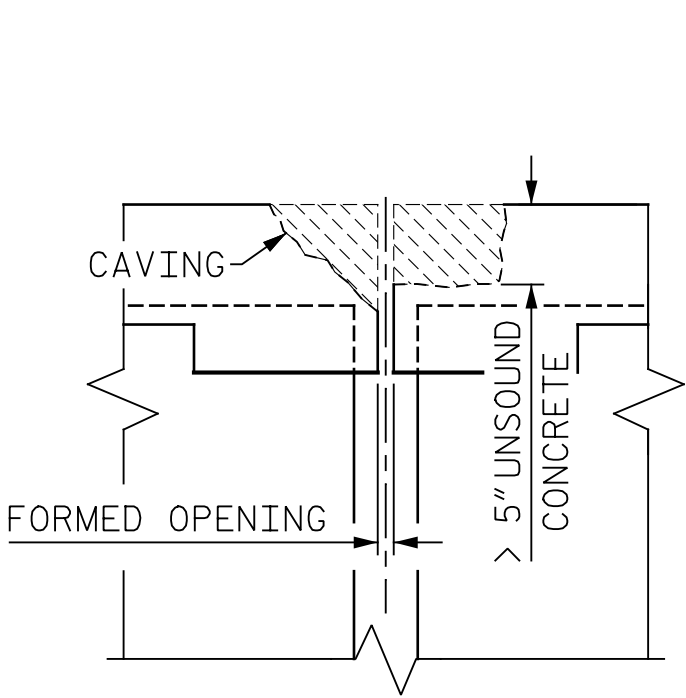
FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

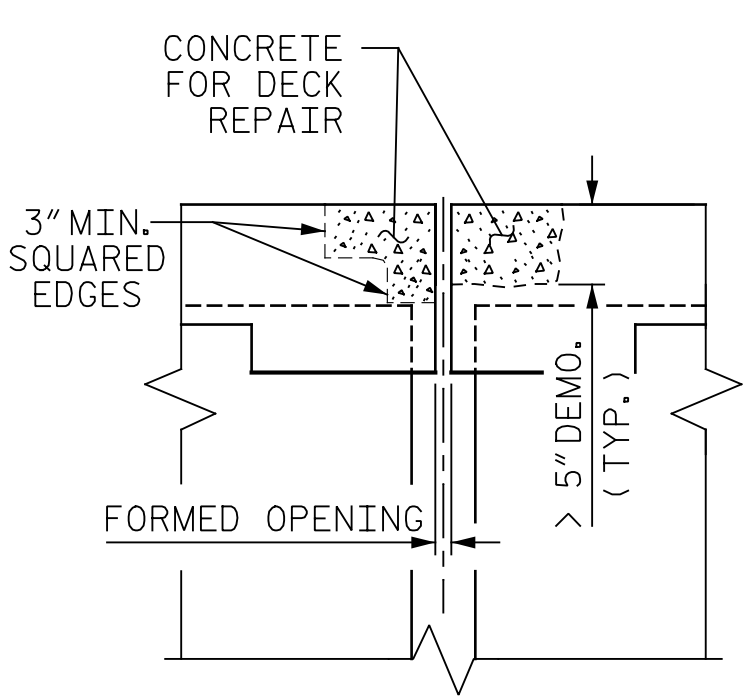
THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2" AT END BENT 1 AND END BENT 2.



EXISTING JOINT
(FOAM SEAL WITH NO HEADER)



JOINT DEMOLITION
FOR CAVING OR
UNFOUND CONCRETE



REPAIRED JOINT

EXISTING JOINT TYPES

CONCRETE FOR DECK REPAIR DETAIL

(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

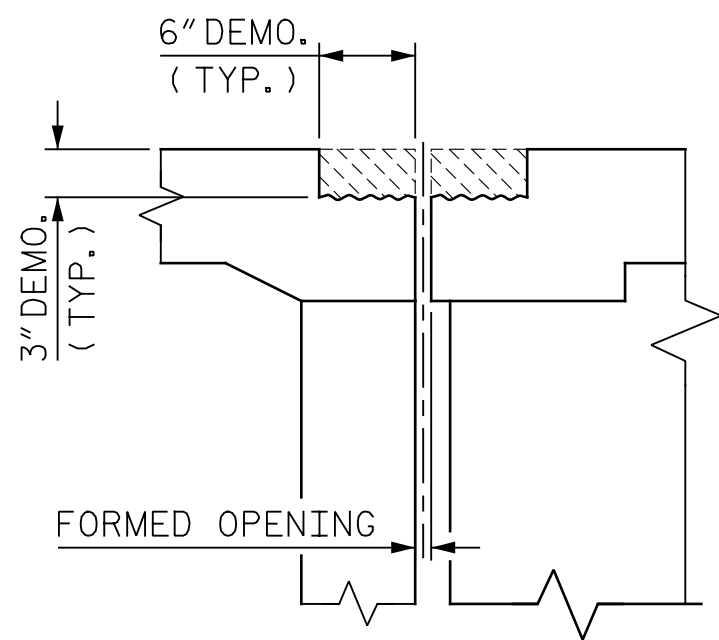
NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

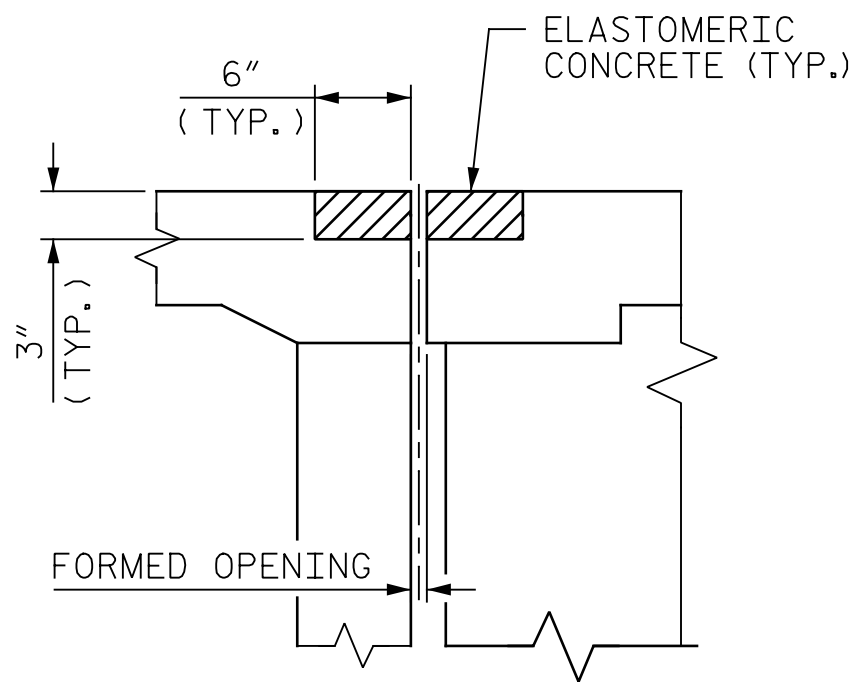
DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

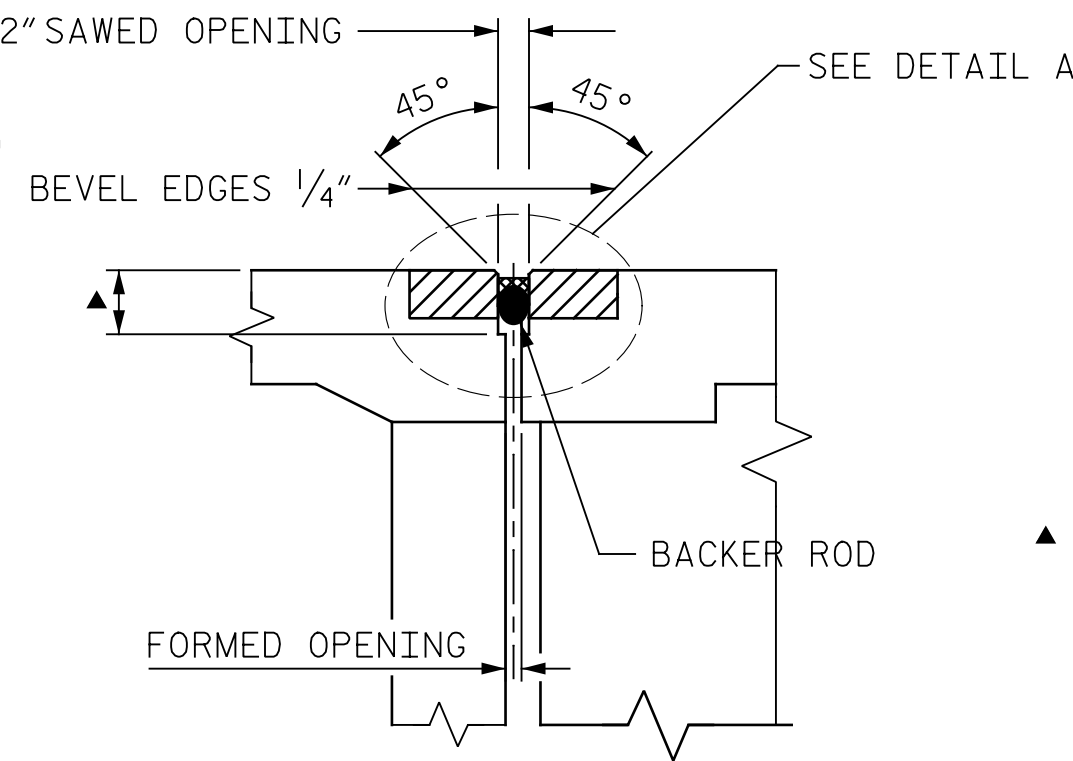
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



MINIMUM
JOINT DEMOLITION

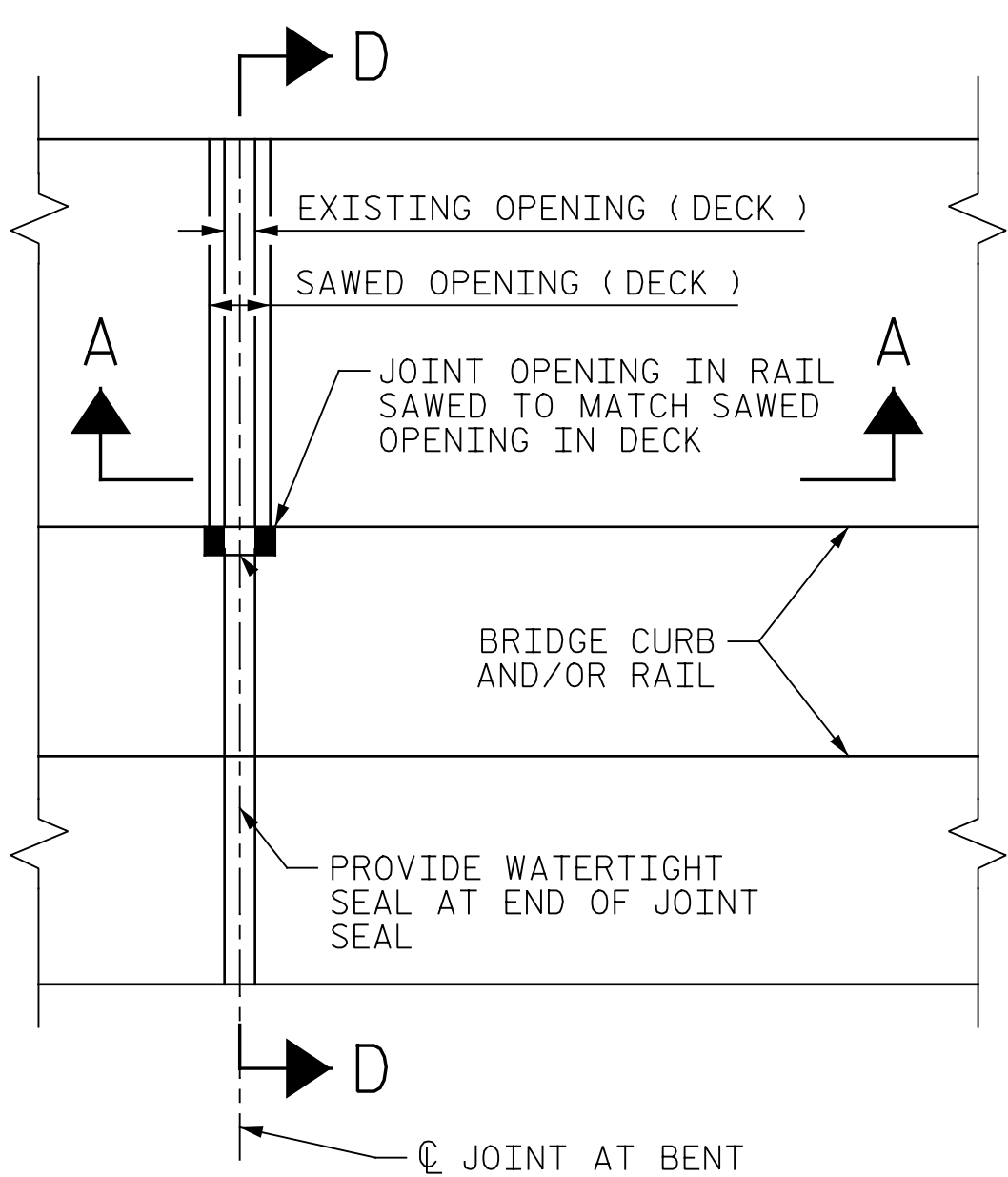


PROPOSED JOINT
PRE-SAWED DIMENSIONS



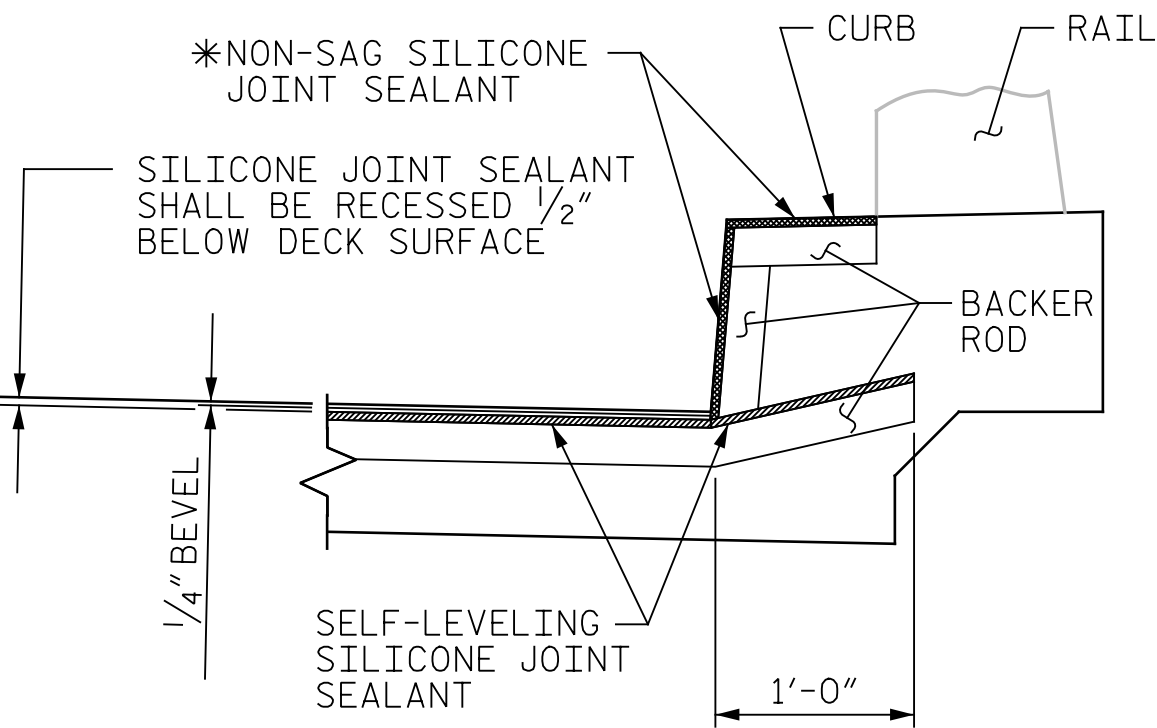
PROPOSED SILICONE
JOINT SEAL

SECTION A-A
PROPOSED JOINT



PLAN

*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
POLK COUNTY
BRIDGE NO. 47, 74, 105

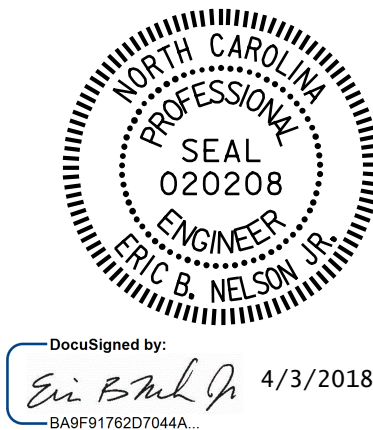
BRIDGE NO.	SILICONE JOINT SEAL (LF)		ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)				JOINT DEMOLITION (SF)		CONCRETE FOR DECK REPAIR (CF)	
	EB 1	EB 2	EB 1	DIM.	EB 2	DIM.	EB 1	EB 2	EB 1	EB 2
740047	32.0	32.0	7.3	(2) 6"x3"	7.3	(2) 6"x3"	29.0	29.0	-	-
740074	30.2	30.2	6.8	(2) 6"x3"	6.8	(2) 6"x3"	27.2	27.2	-	-
740105	30.7	30.7	7.2	(2) 6"x3"	7.2	(2) 6"x3"	28.7	28.7	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



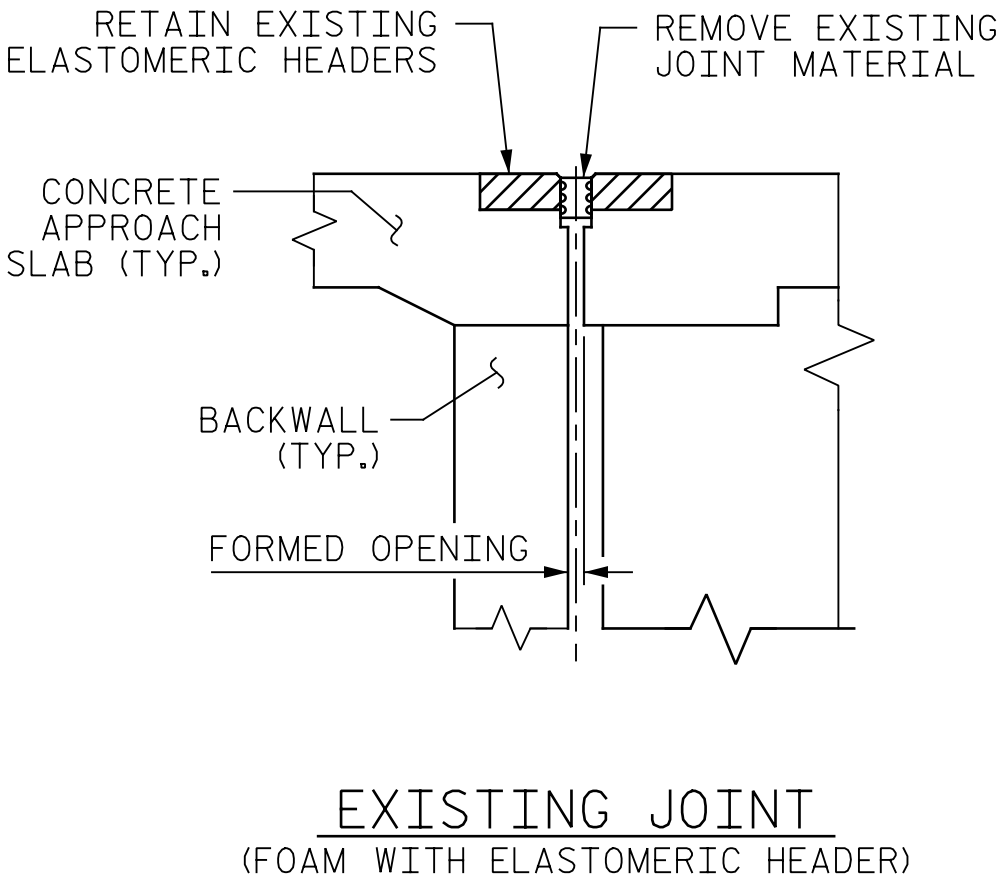
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

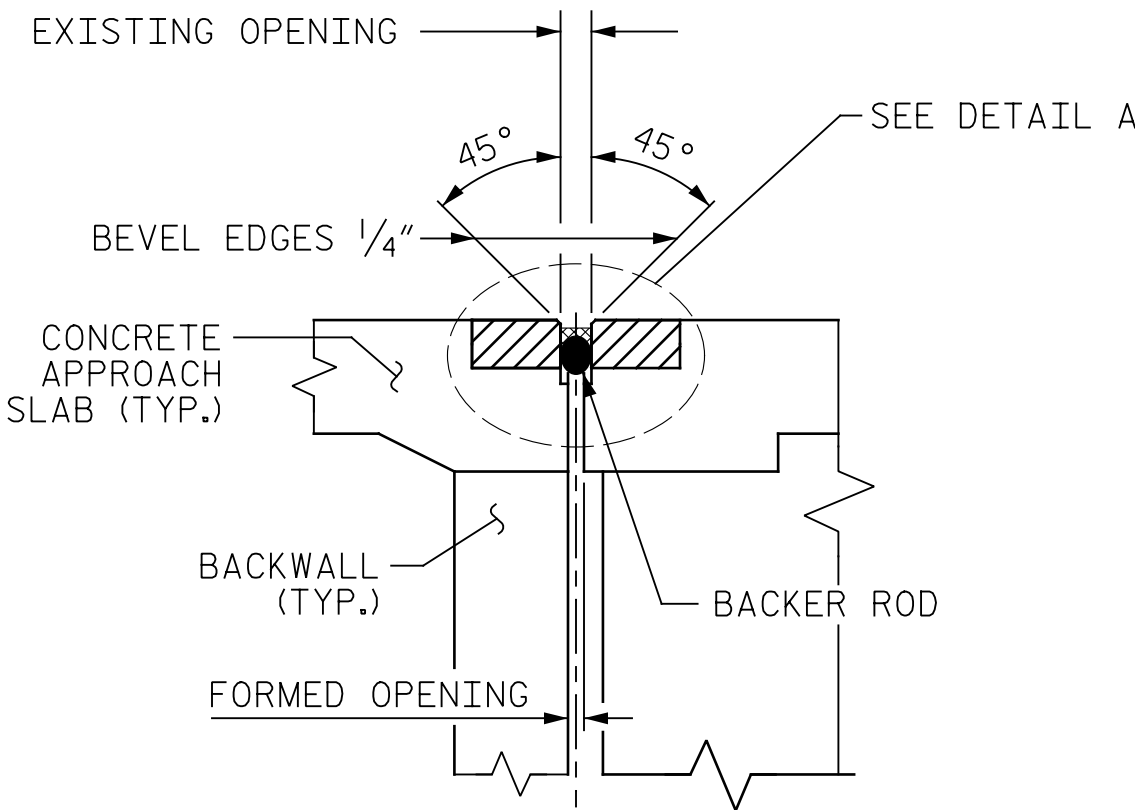
REVISIONS						SHEET NO. S-127
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

NOTES

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

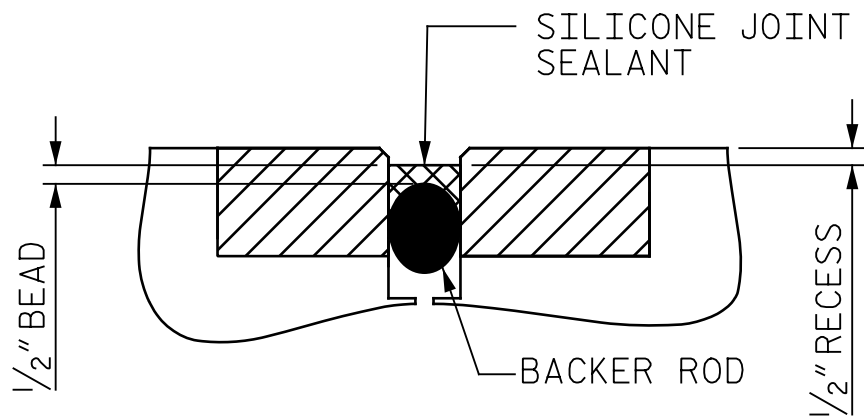


EXISTING JOINT TYPES

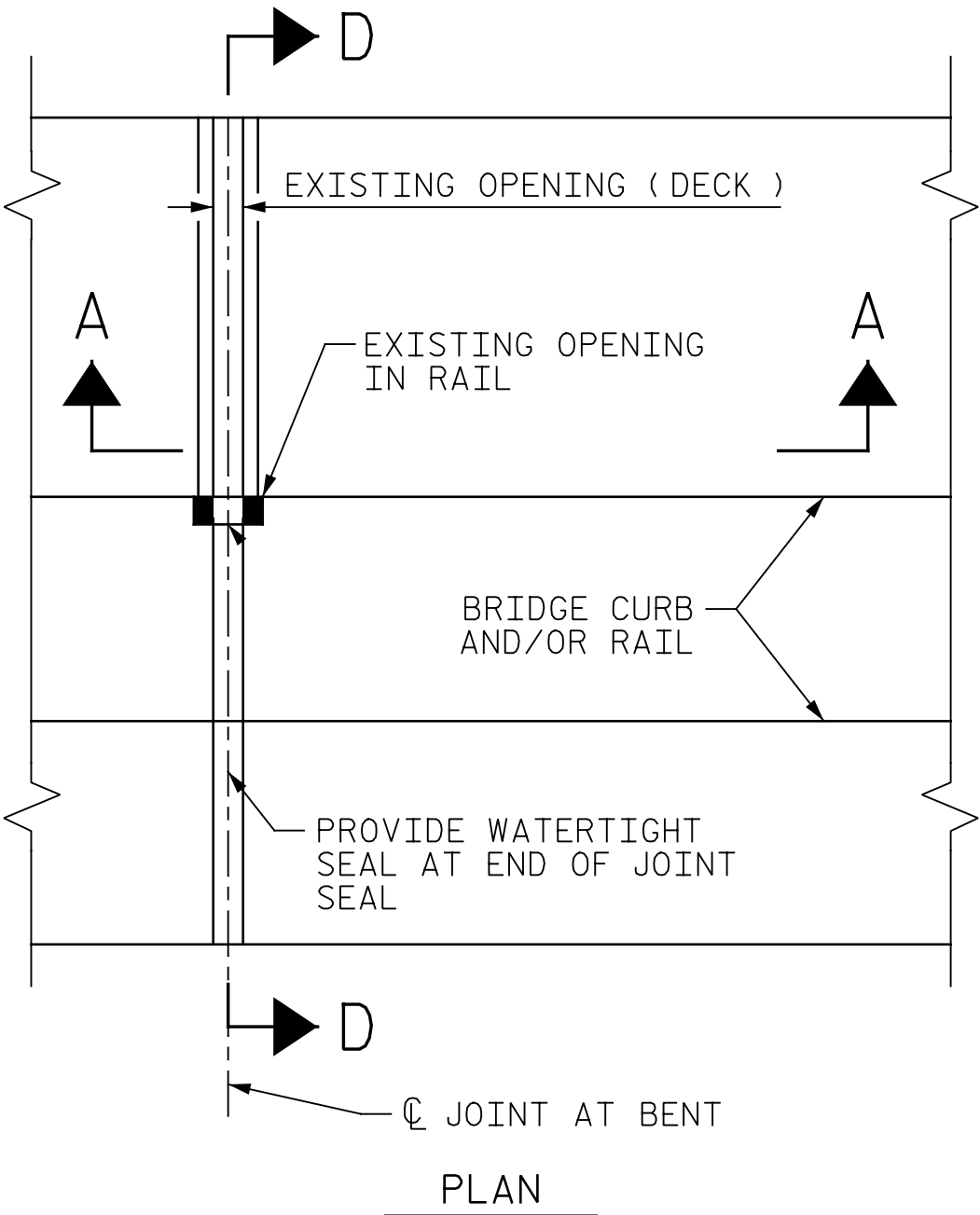


PROPOSED SILICONE JOINT SEAL

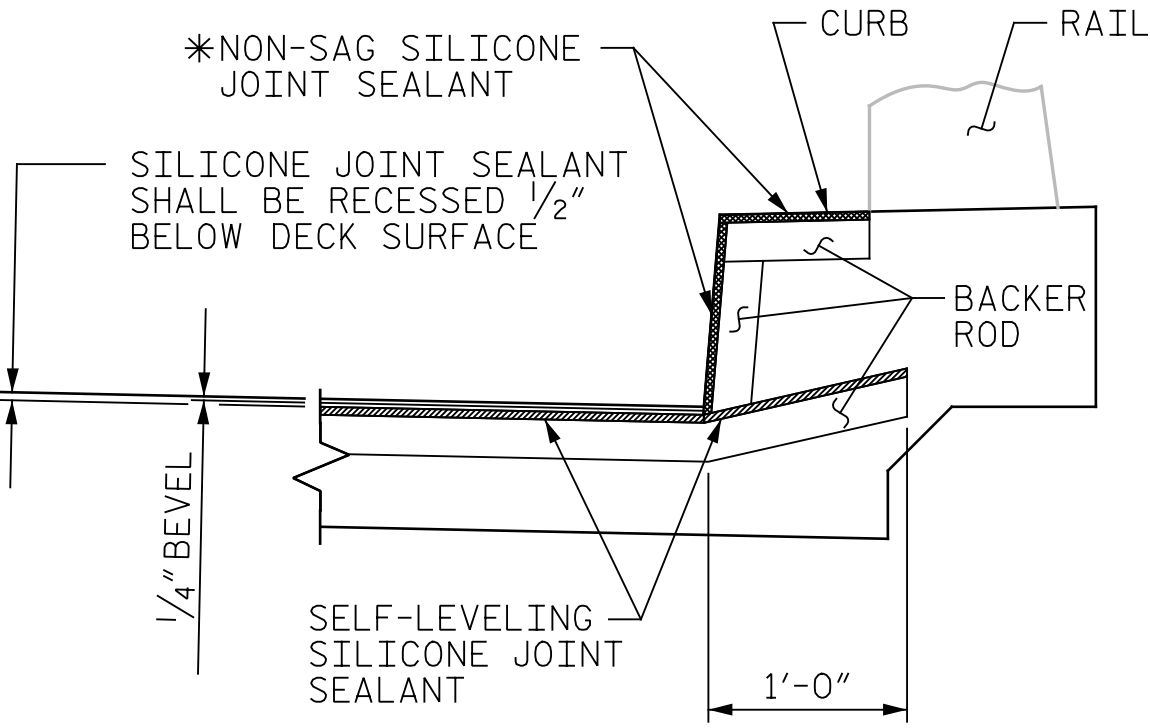
SECTION A-A
PROPOSED JOINT



DETAIL A



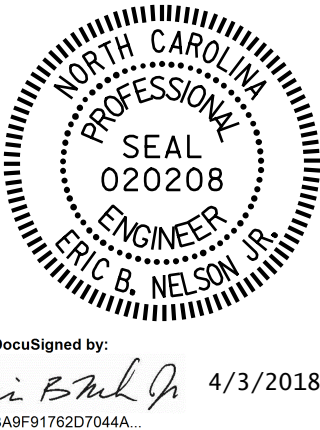
*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



JOINT SEAL DETAILS AT BENT

	SILICONE JOINT SEAL (LF)	
BRIDGE NO.	EB 1	EB 2
740002	29.9	29.9

PROJECT NO. 14BPR.3.1
POLK COUNTY
BRIDGE NO. 2

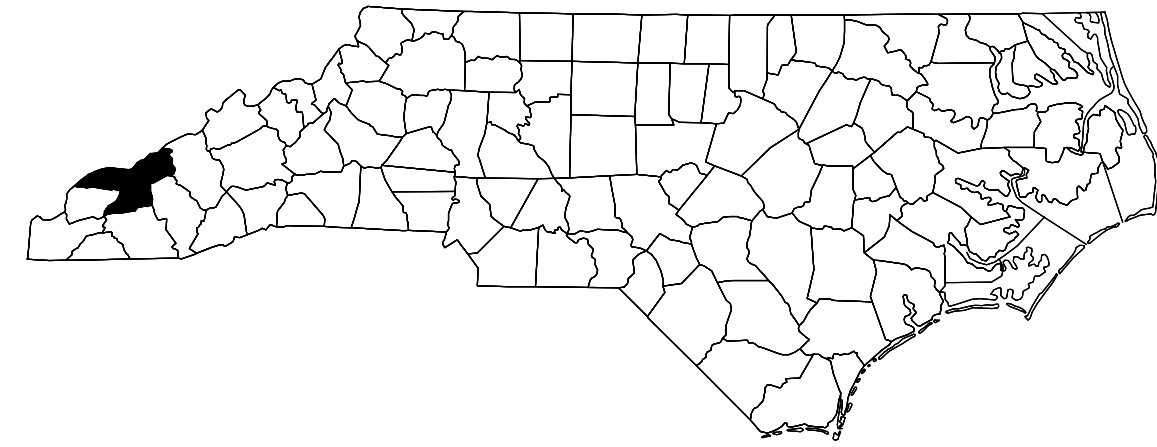


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL FOR SILICONE JOINT SEAL					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					S-128
					142

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

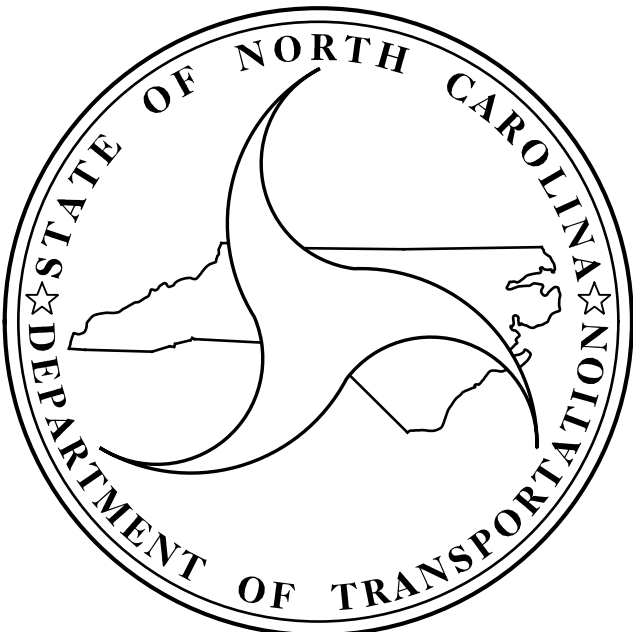
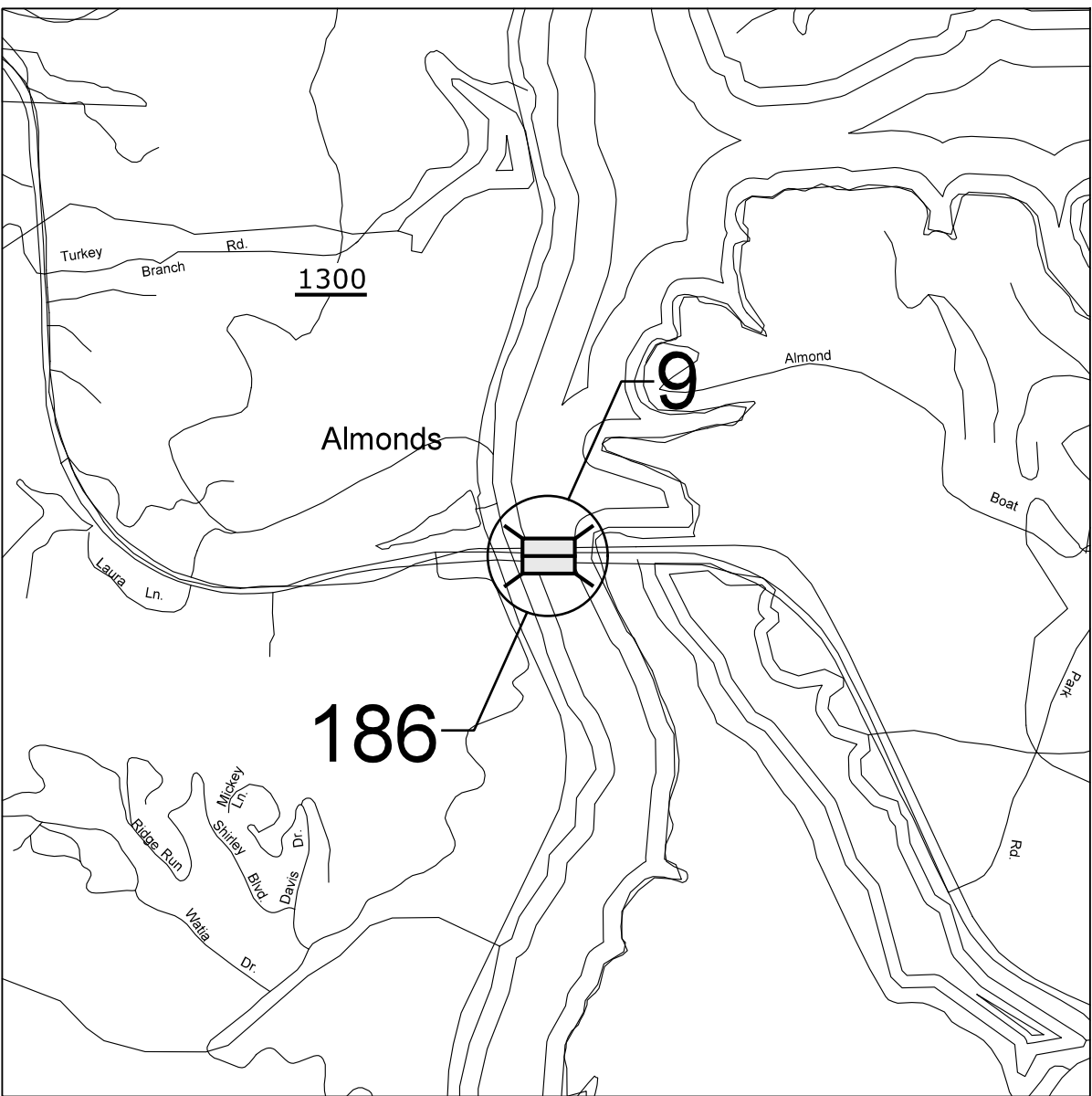
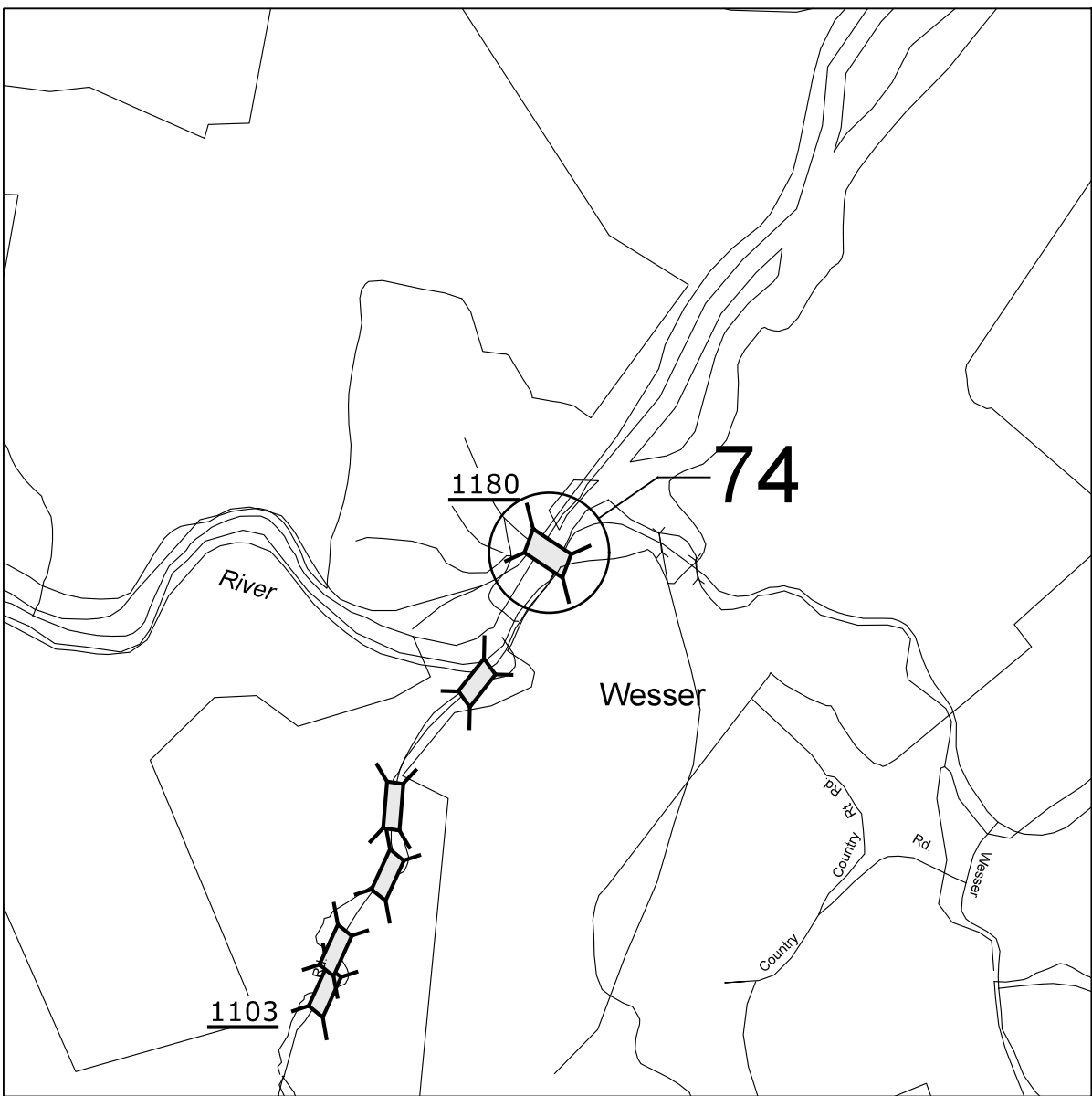
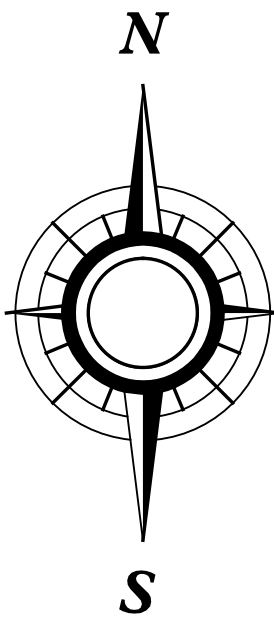
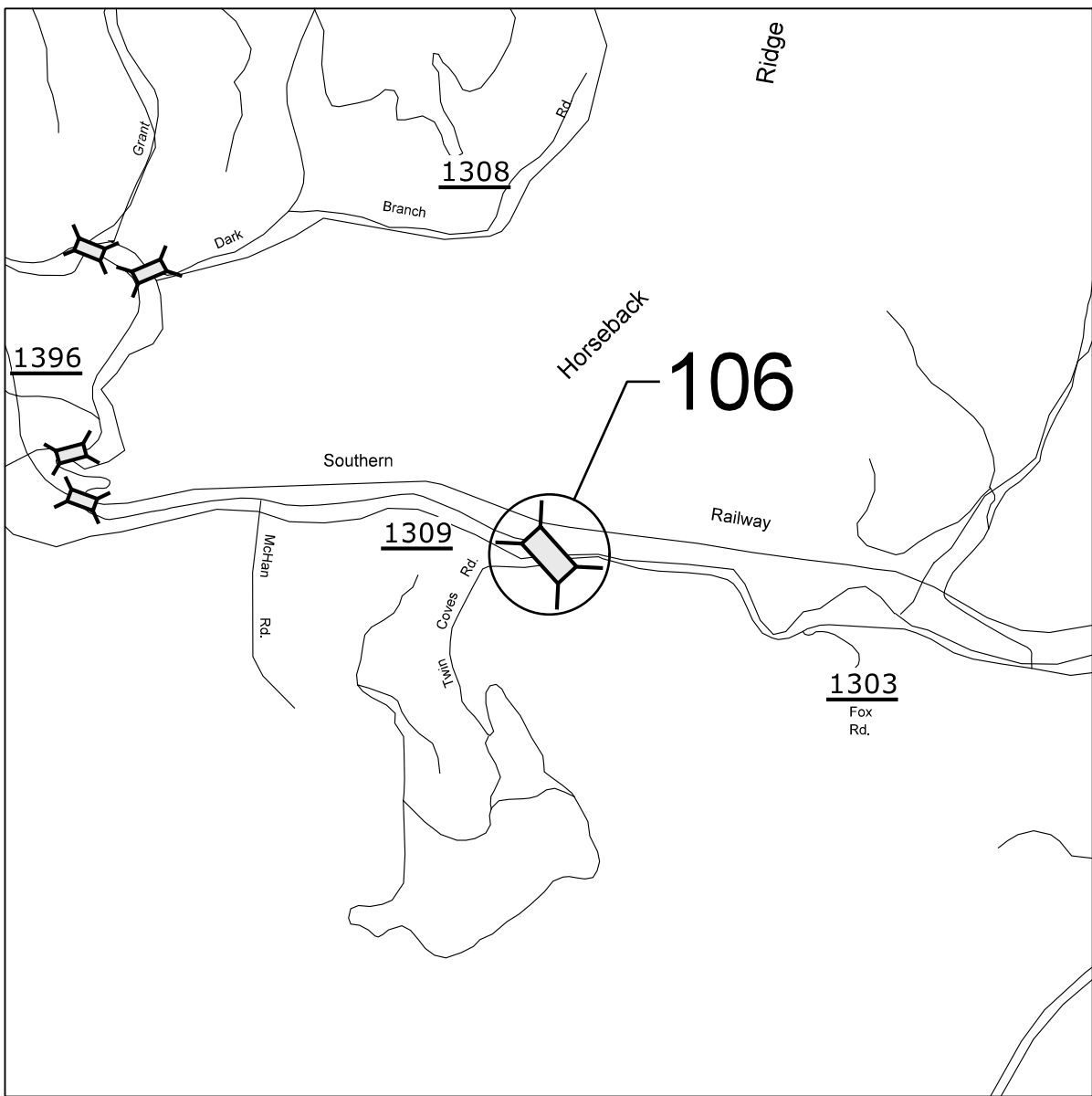
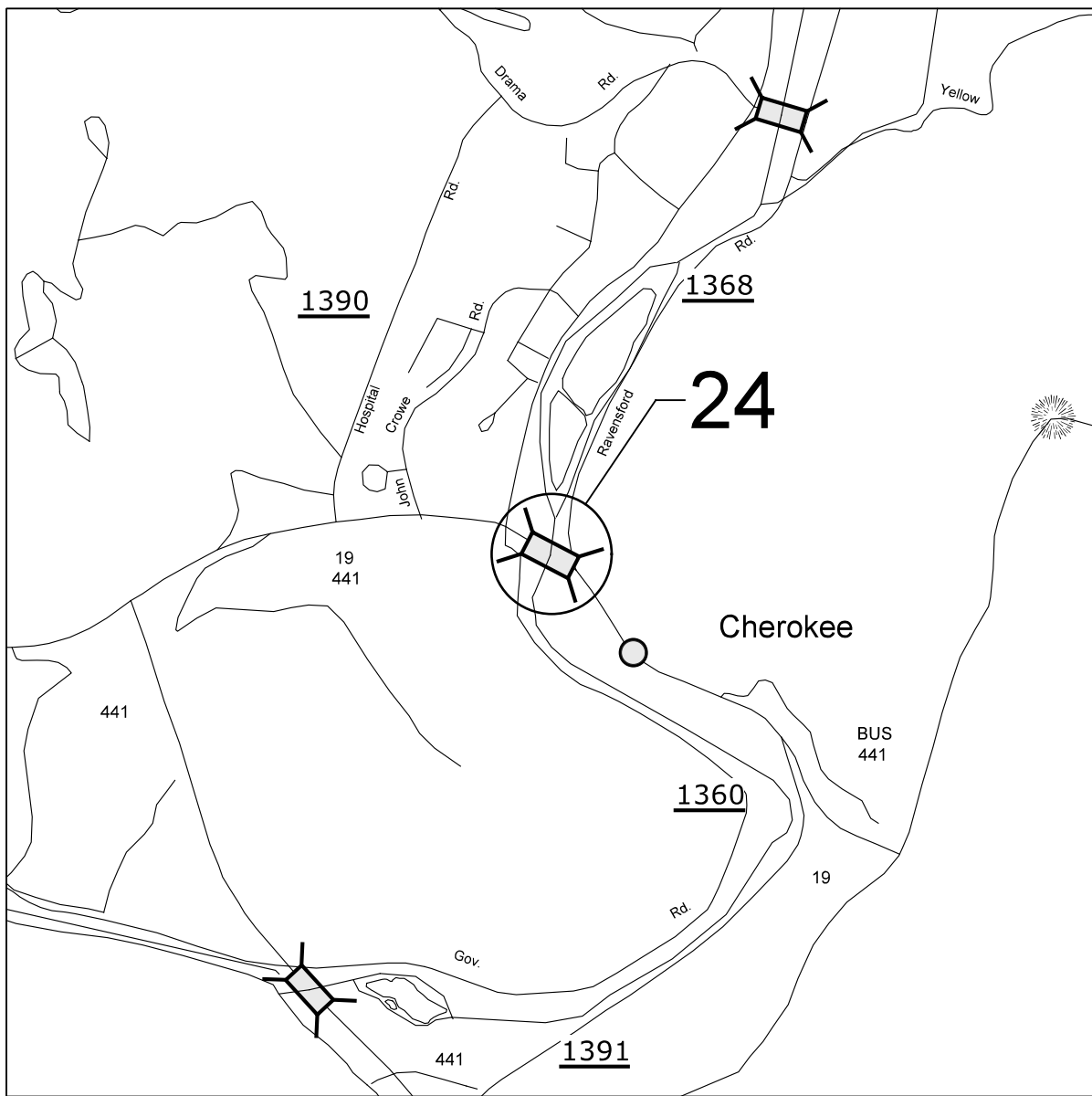
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-129

SWAIN COUNTY

LOCATION: SWAIN COUNTY:

BRIDGE #009 ON NC28 SBL OVER NANTAHALA RIVER AND SOUTH RAILROAD
BRIDGE #024 ON US19 OVER OCONALUFTEE RIVER
BRIDGE #074 ON SR1180 OVER NANTAHALA RIVER
BRIDGE #106 ON SR1309 OVER ALARKA CREEK
BRIDGE #186 ON NC28 NBL OVER NANTAHALA RIVER AND NORFOLK SOUTHERN RAILROAD

TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS



DESIGN DATA
SWAIN COUNTY

#009	ADT 2003	=	2,500
#024	ADT 2015	=	12,000
#074	ADT 1995	=	10
#106	ADT 2011	=	660
#186	ADT 2013	=	3,550

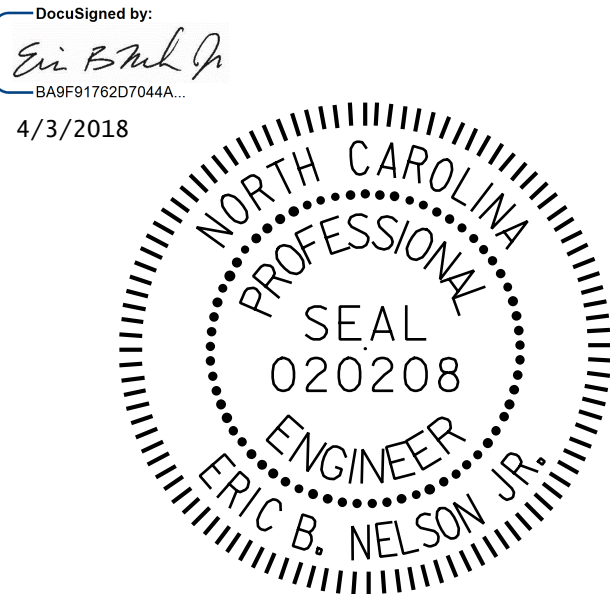
PROJECT LENGTH
SWAIN COUNTY

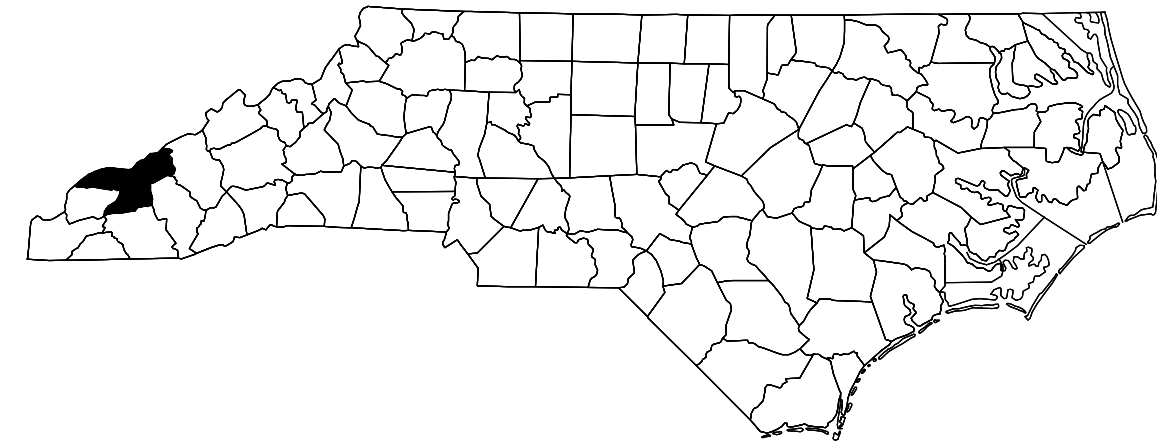
#009	=	0.130	MILE
#024	=	0.038	MILE
#074	=	0.031	MILE
#106	=	0.019	MILE
#186	=	0.143	MILE

PLANS PREPARED BY:

 **Gannett Fleming**
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-130

SWAIN COUNTY

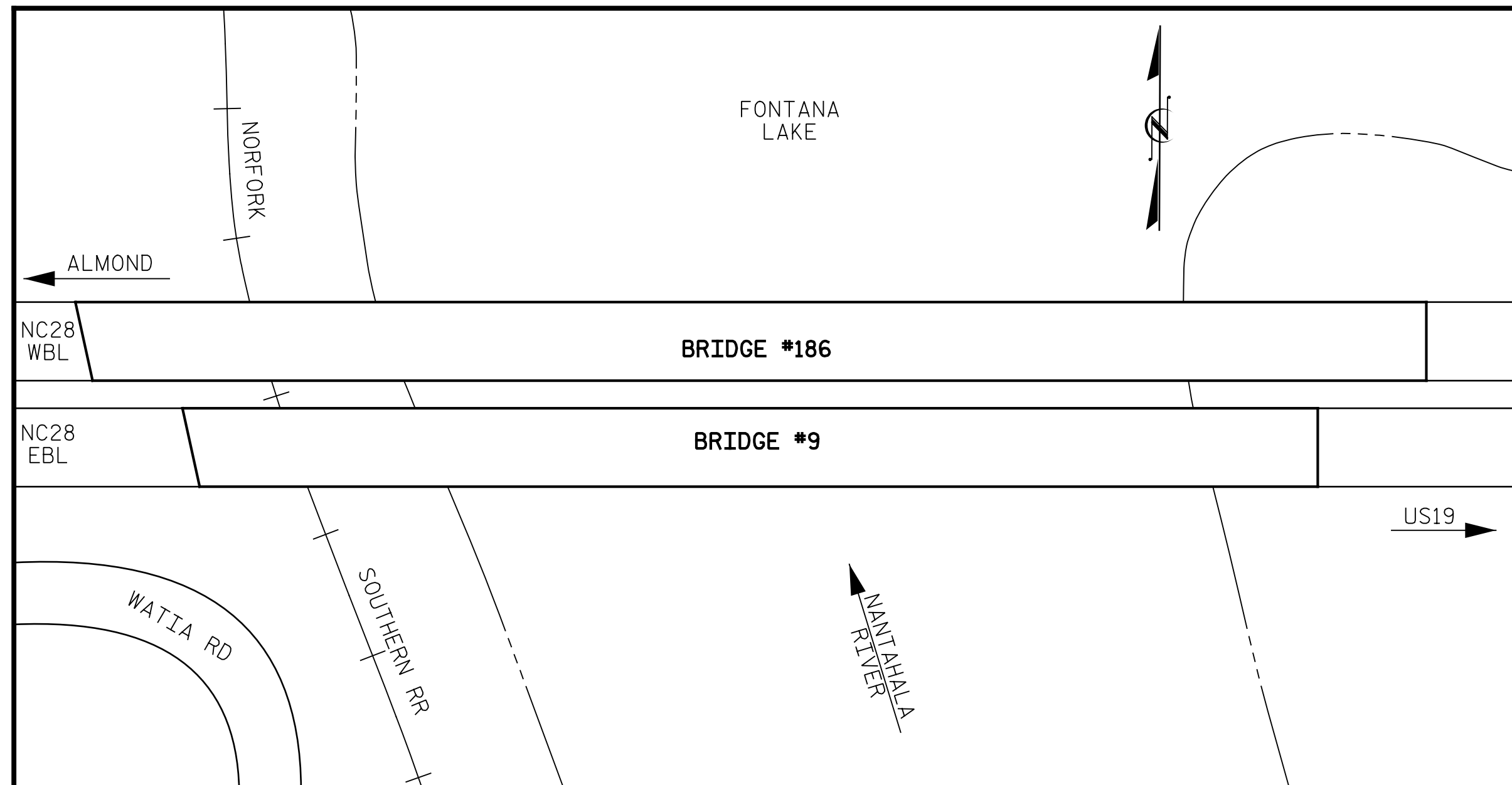
LOCATION: SWAIN COUNTY:

BRIDGE #009 ON NC28 SBL OVER NANTAHALA RIVER AND SOUTH RAILROAD
BRIDGE #024 ON US19 OVER OCONALUFTEE RIVER
BRIDGE #074 ON SR1180 OVER NANTAHALA RIVER
BRIDGE #106 ON SR1309 OVER ALARKA CREEK
BRIDGE #186 ON NC28 NBL OVER NANTAHALA RIVER AND NORFOLK SOUTHERN RAILROAD

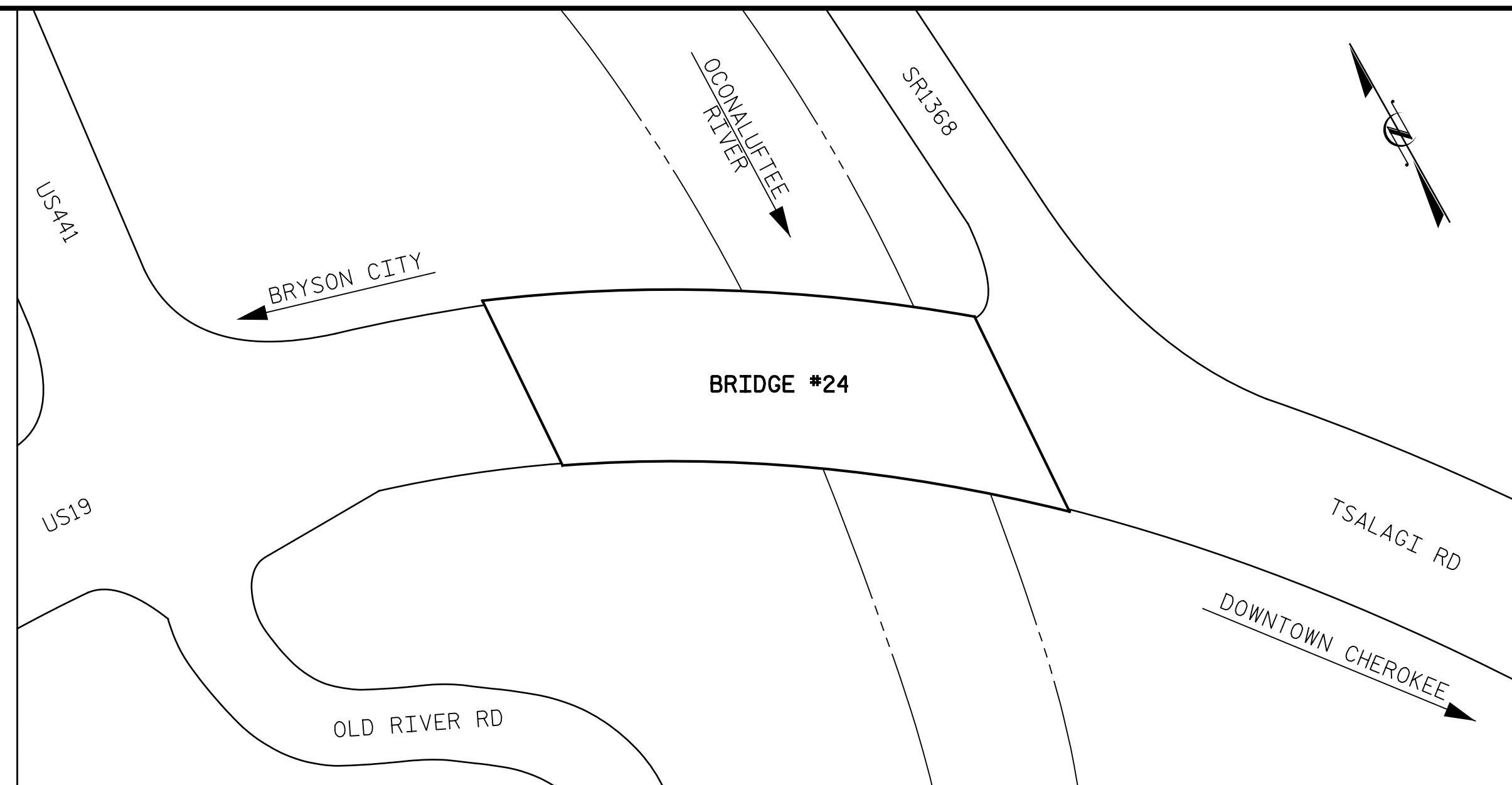
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

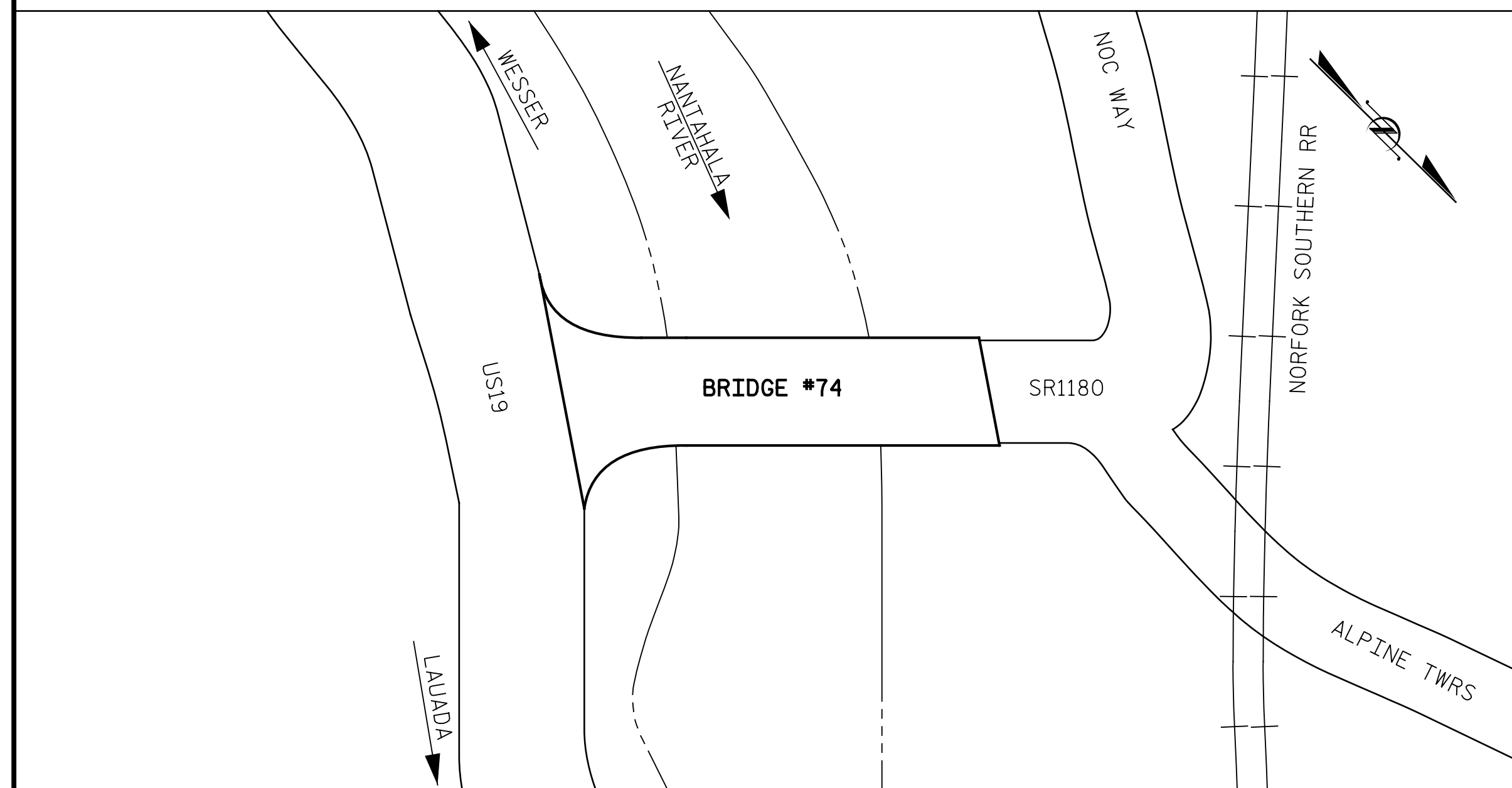
SHEET NO.	DESCRIPTION
S-129	TITLE SHEET
S-130	INDEX OF SHEETS
S-131 THRU S-138	STRUCTURAL PLANS – JOINT REPLACEMENTS



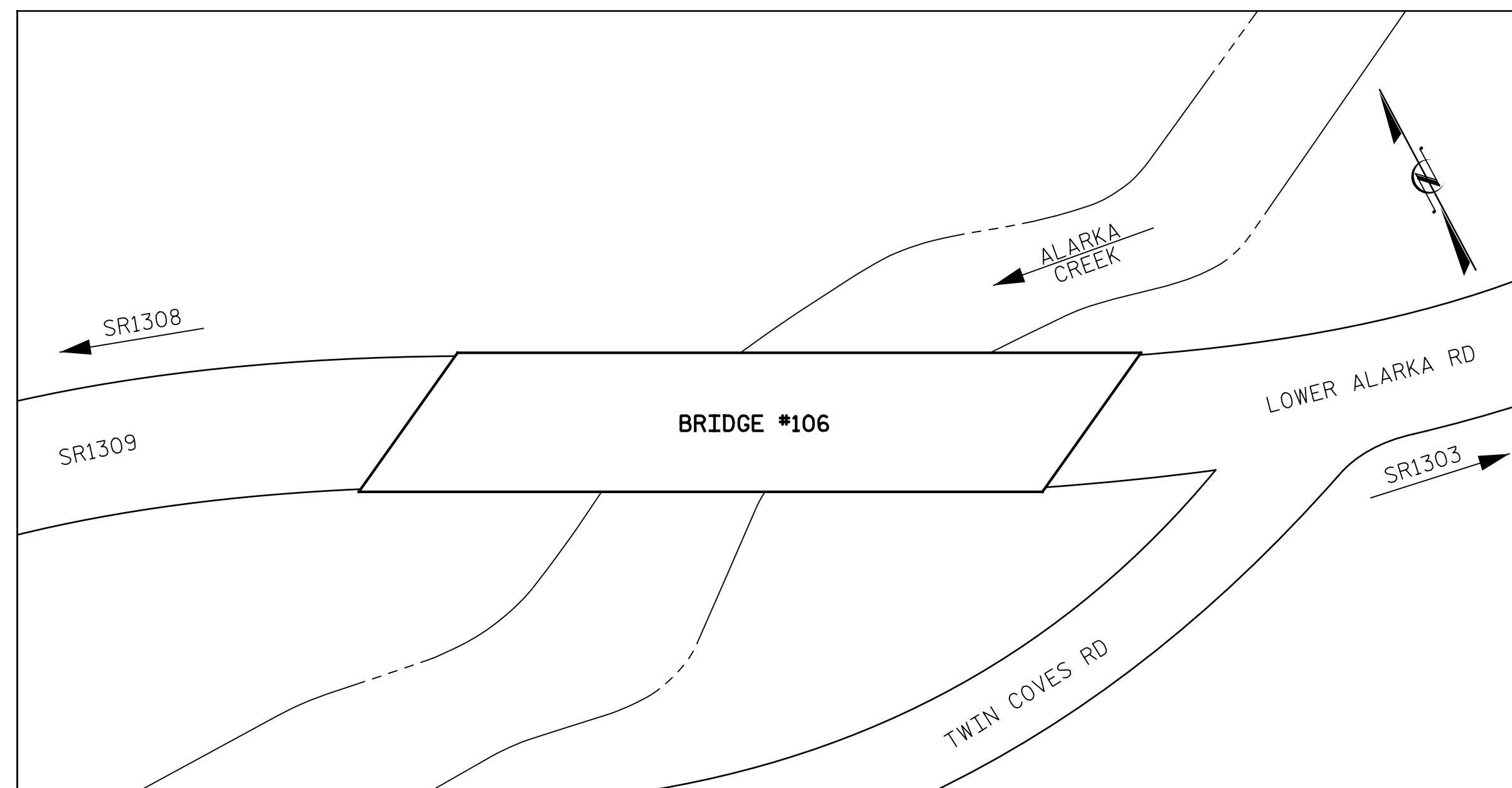
BRIDGE #9 AND #186



BRIDGE #24



BRIDGE #74



BRIDGE #106

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING
OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT
PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL, SEE
SPECIAL PROVISIONS

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR MODULAR JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

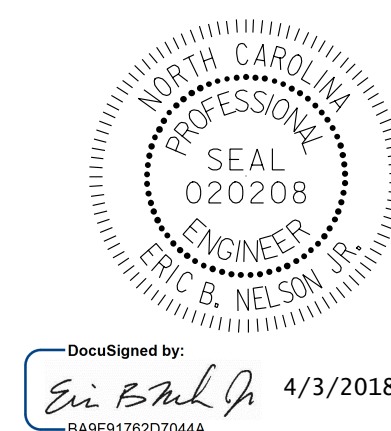
FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR SWAIN COUNTY									
	CLASS AA CONCRETE	EPOXY COATED R/F STEEL	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	SYNTHETIC RUBBER EXPANSION JOINT SEAL	CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	MODULAR JOINT DEMOLITION
	CY.	LBS.	LUMP SUM	LN. FT.	LN. FT.	CU. FT.	CU. FT.	SQ. FT.	SQ. FT.
860009	-	-	-	35.0	68.0	-	-	-	-
860024	-	-	LUMP SUM	185.4	-	-	37.8	151.4	-
860074	-	-	LUMP SUM	107.5	-	-	-	-	-
860106	-	-	LUMP SUM	93.2	-	-	21.8	87.2	-
860186	4.4	587.0	-	37.0	72.0	-	22.0	36.1	204.0
TOTAL	4.4	587.0	LUMP SUM	458.1	140.0	-	81.6	274.7	204.0

PROJECT NO. 14BPR.3.1
SWAIN COUNTY



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL & BRIDGE LOCATION SKETCHES

REVISIONS						SHEET NO. S-131
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:



Gannett Fleming
Excellence Delivered **As Promised**

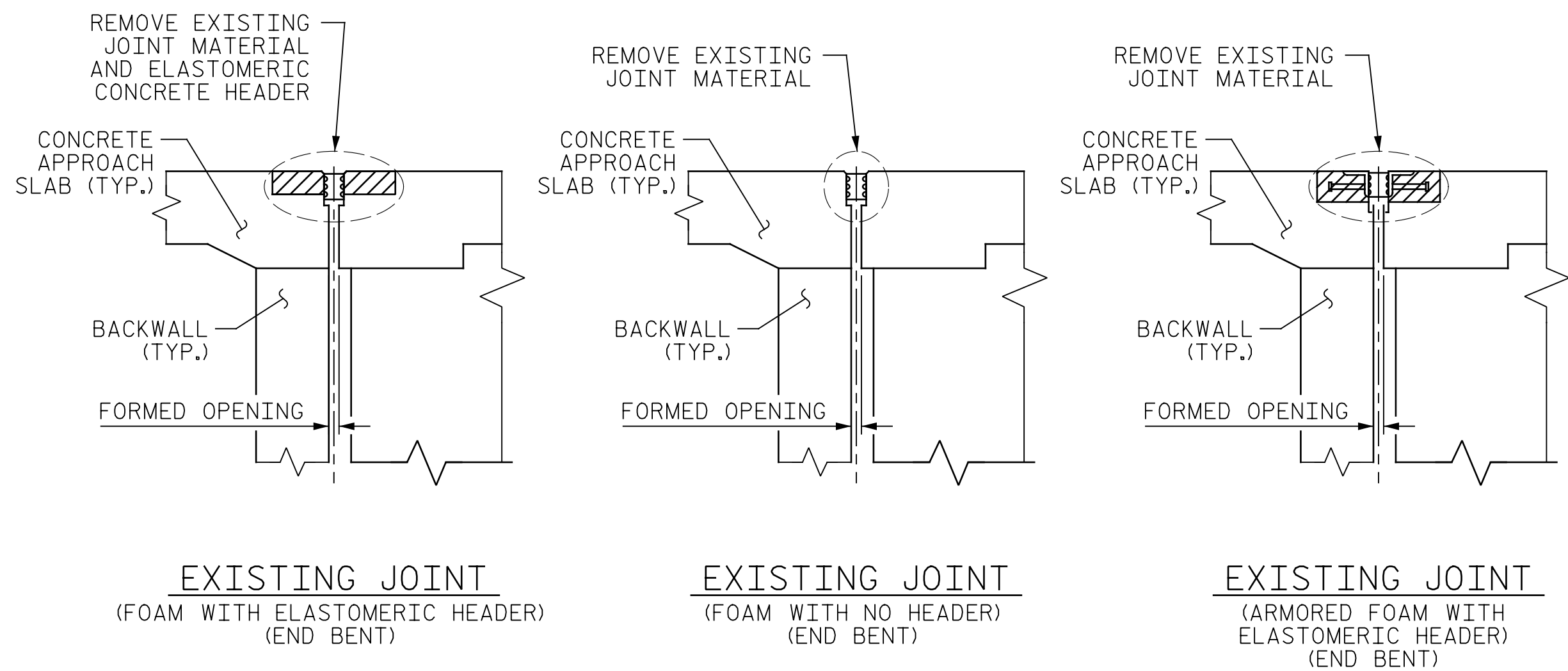
**2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660**

NC Lic. No. F-0270

73 DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

4/3/2018

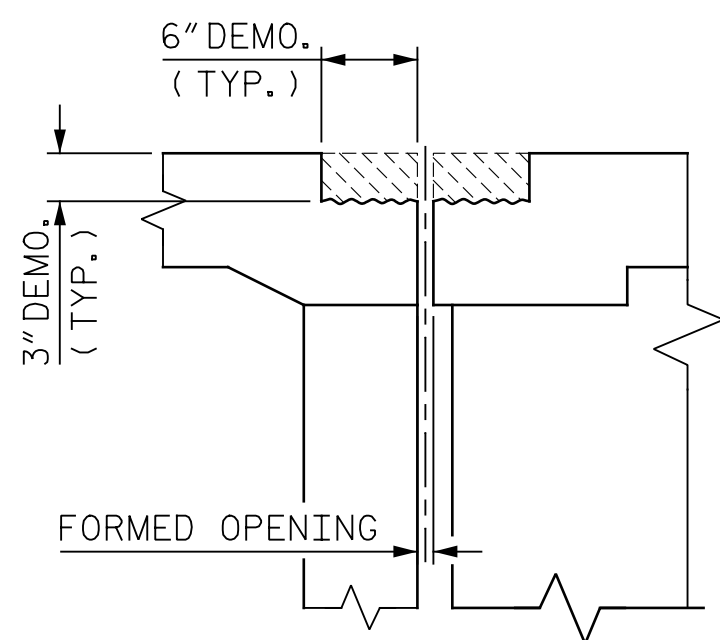
4/3/2018



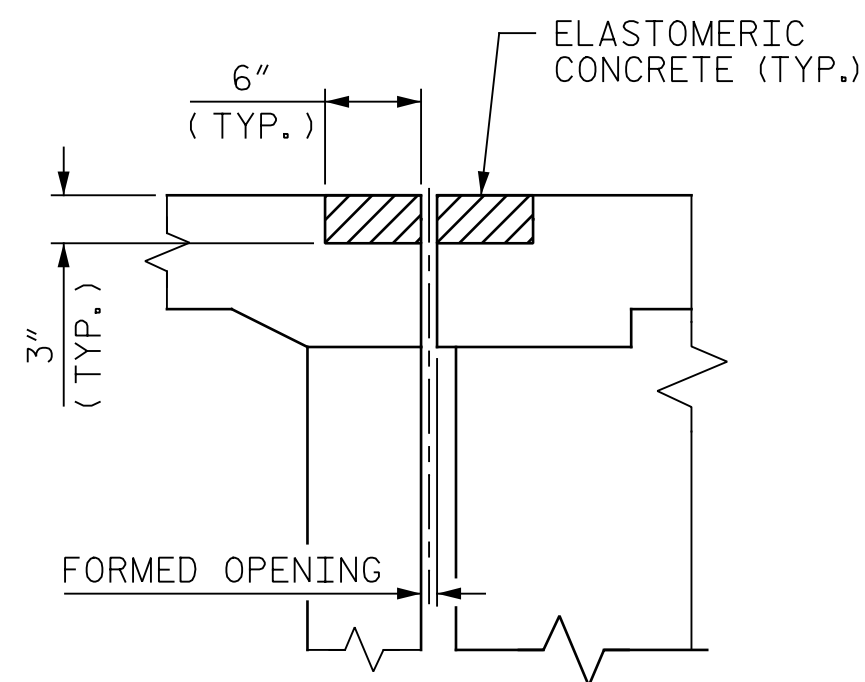
EXISTING JOINT TYPES

NOTES

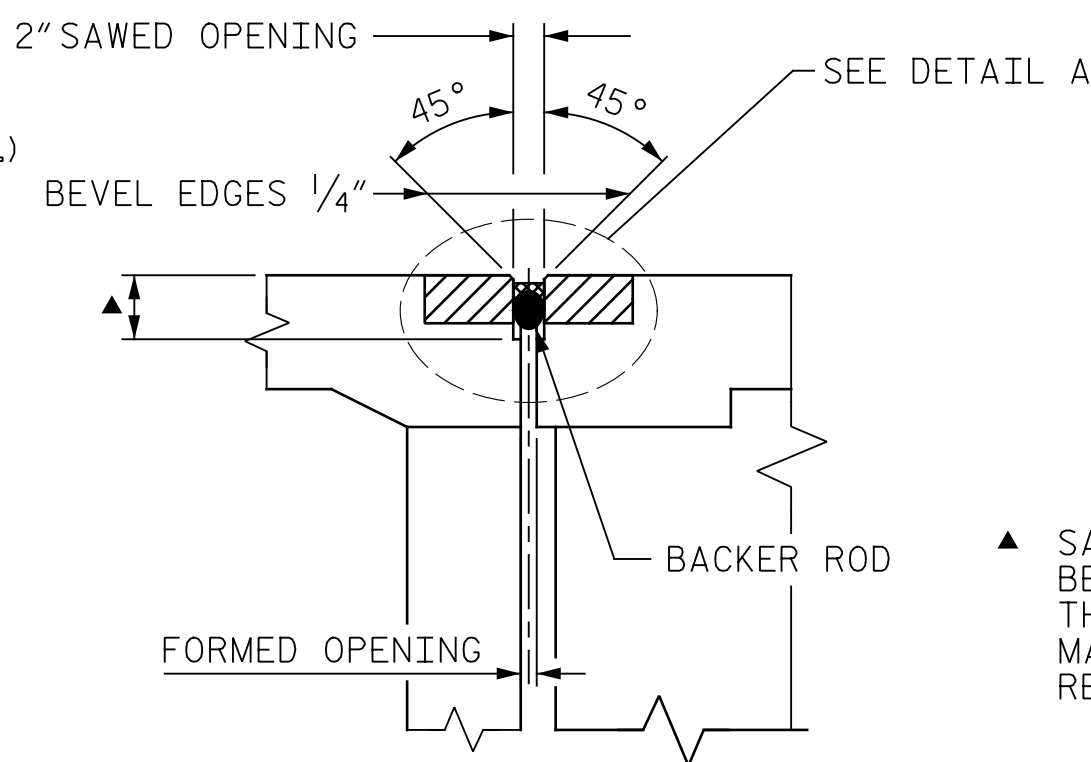
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.
- FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



MINIMUM JOINT DEMOLITION

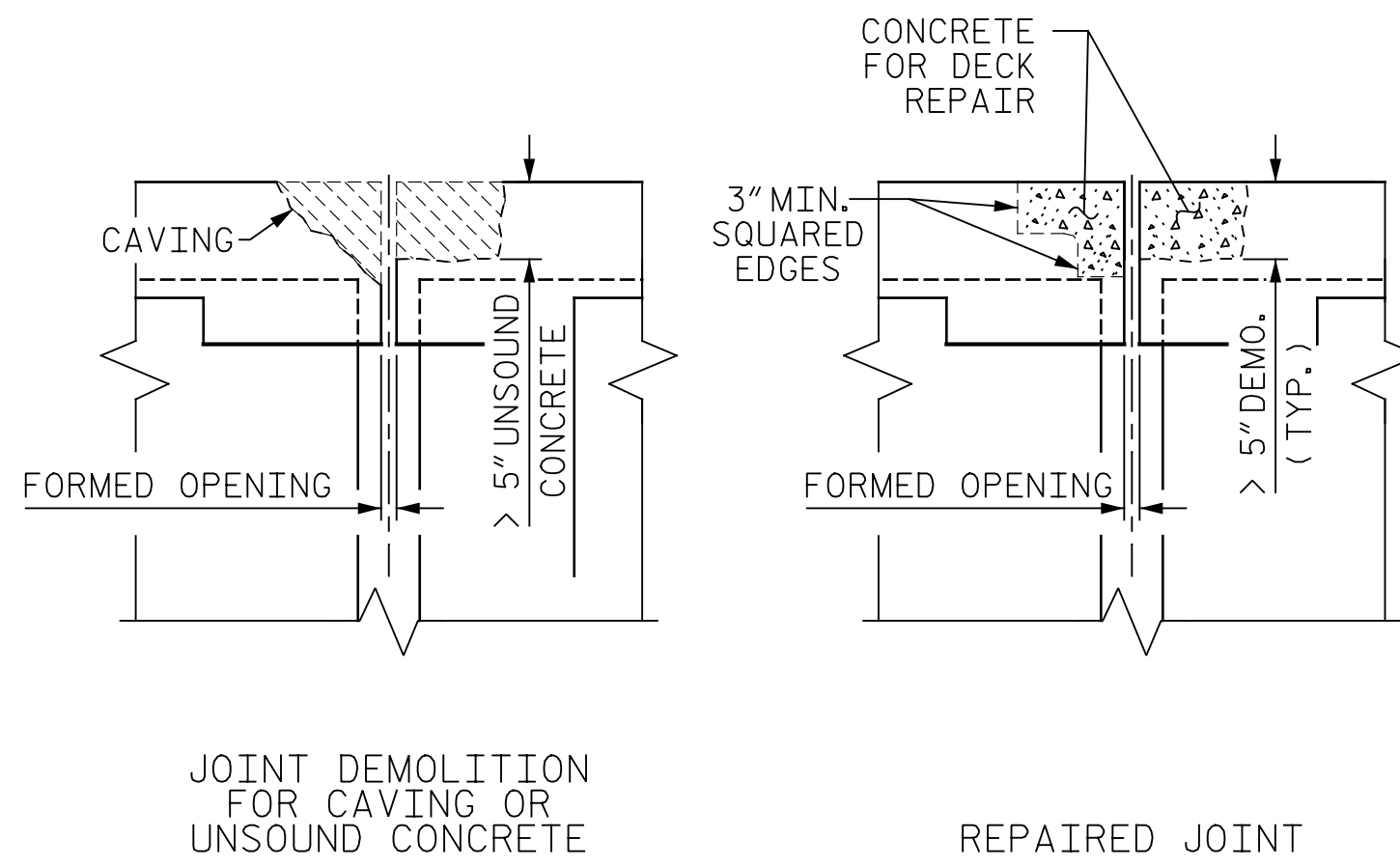


PROPOSED JOINT PRE-SAWED DIMENSIONS



PROPOSED SILICONE JOINT SEAL

SECTION A-A PROPOSED JOINT



CONCRETE FOR DECK REPAIR DETAIL

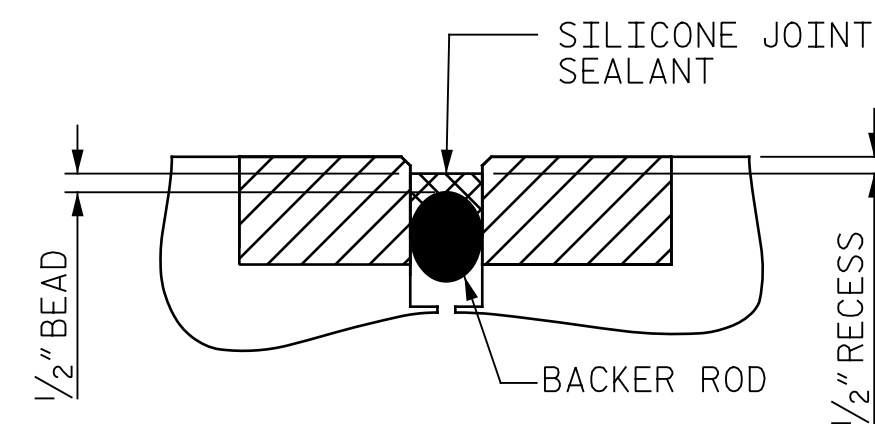
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

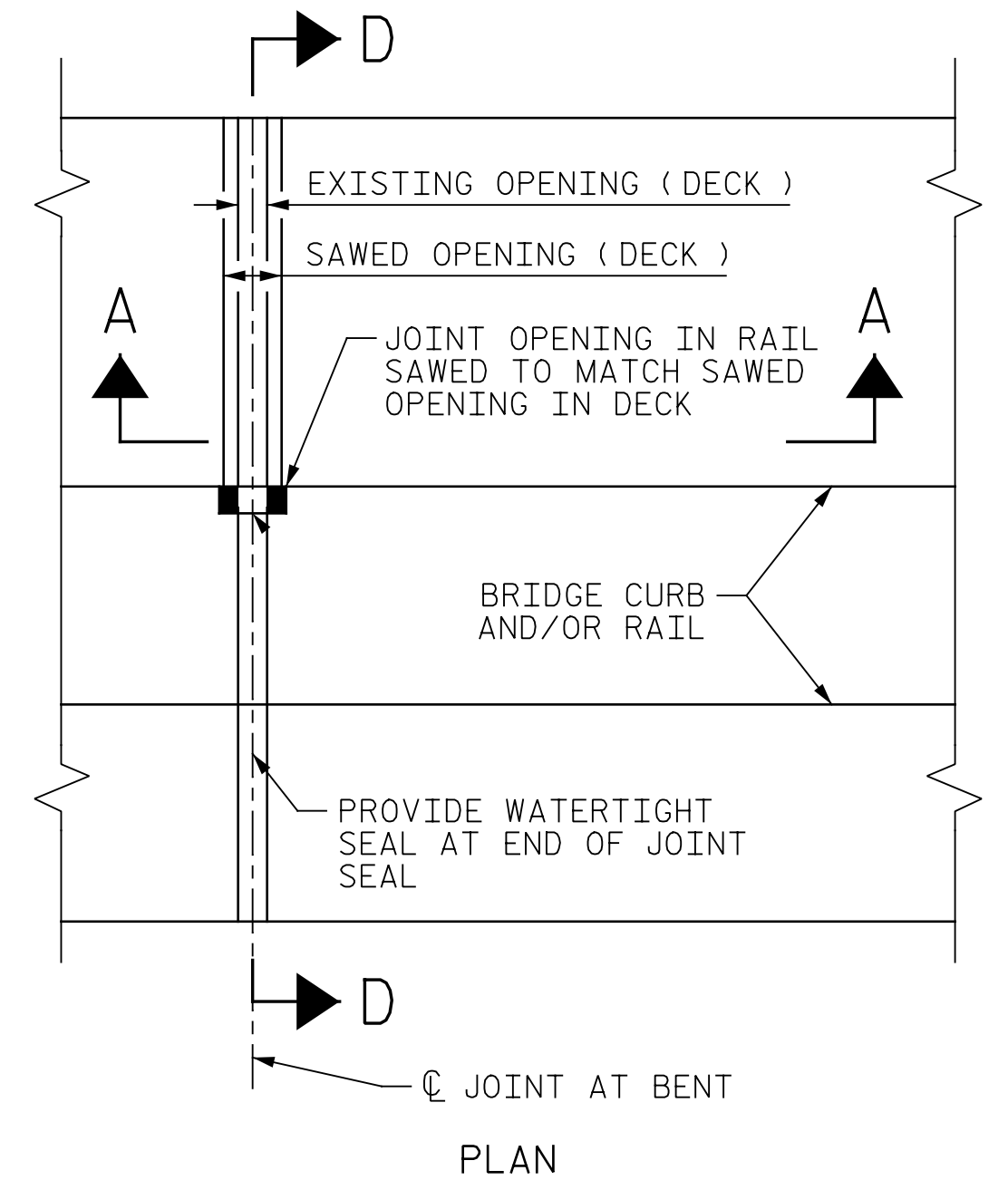
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2\"/>

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

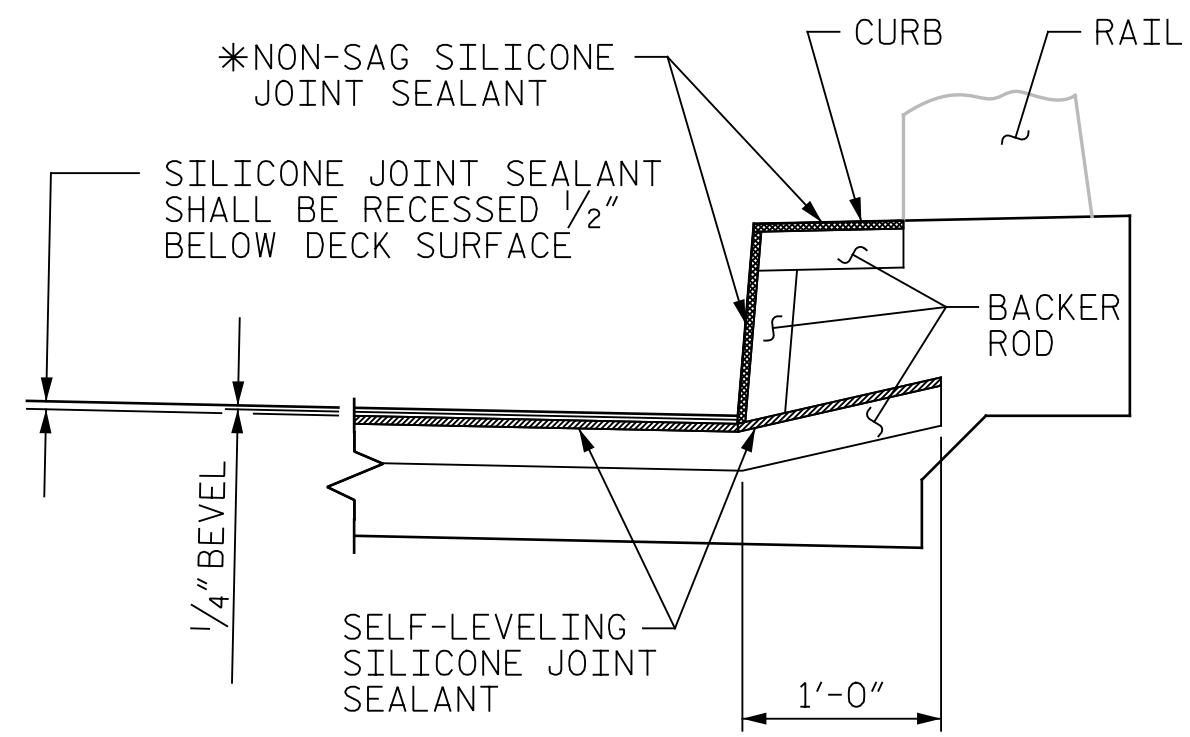
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



DETAIL A

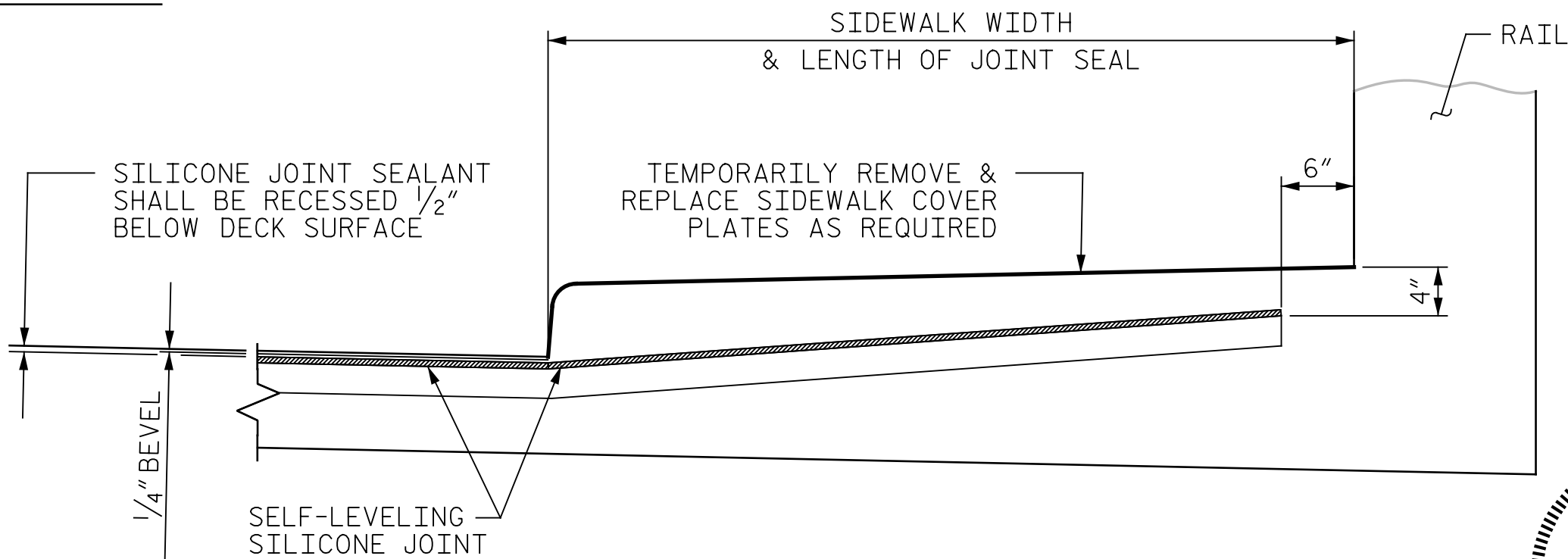


*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT



JOINT SEAL DETAILS AT SIDEWALK

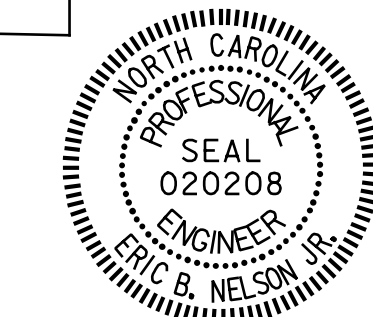
PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 24, 106, 186

BRIDGE NO.	SILICONE JOINT SEAL (LF)			ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)						JOINT DEMOLITION (SF)			CONCRETE FOR DECK REPAIR (CF)		
	EB 1	BENT 1	EB 2	EB 1	DIM.	BENT 1	DIM.	EB 2	DIM.	EB 1	BENT 1	EB 2	EB 1	BENT 1	EB 2
860024	92.7	-	92.7	18.9	(2) 6\"X3\"	-	-	18.9	(2) 6\"X3\"	75.7	-	75.7	-	-	-
860106	46.6	-	46.6	10.9	(2) 6\"X3\"	-	-	10.9	(2) 6\"X3\"	43.6	-	43.6	-	-	-
860186	37.0	-	-	9.0	(2) 6\"X3\"	-	-	-	-	36.1	-	-	-	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
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Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

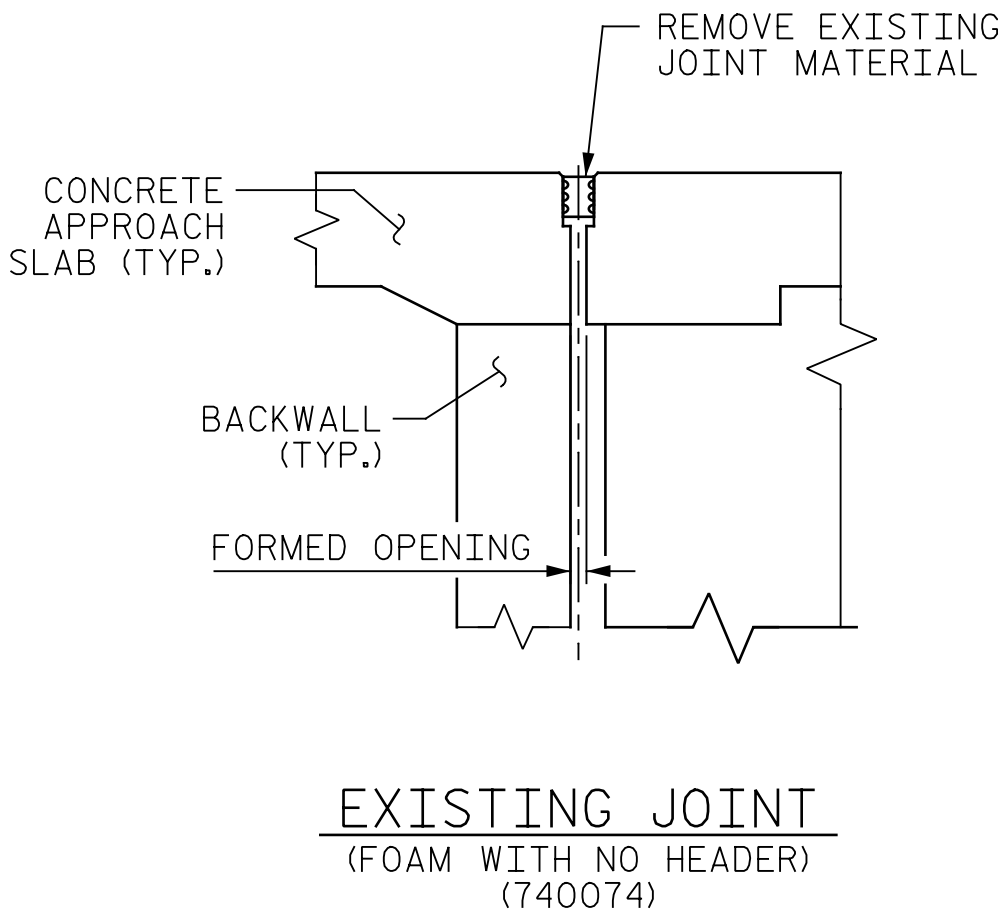
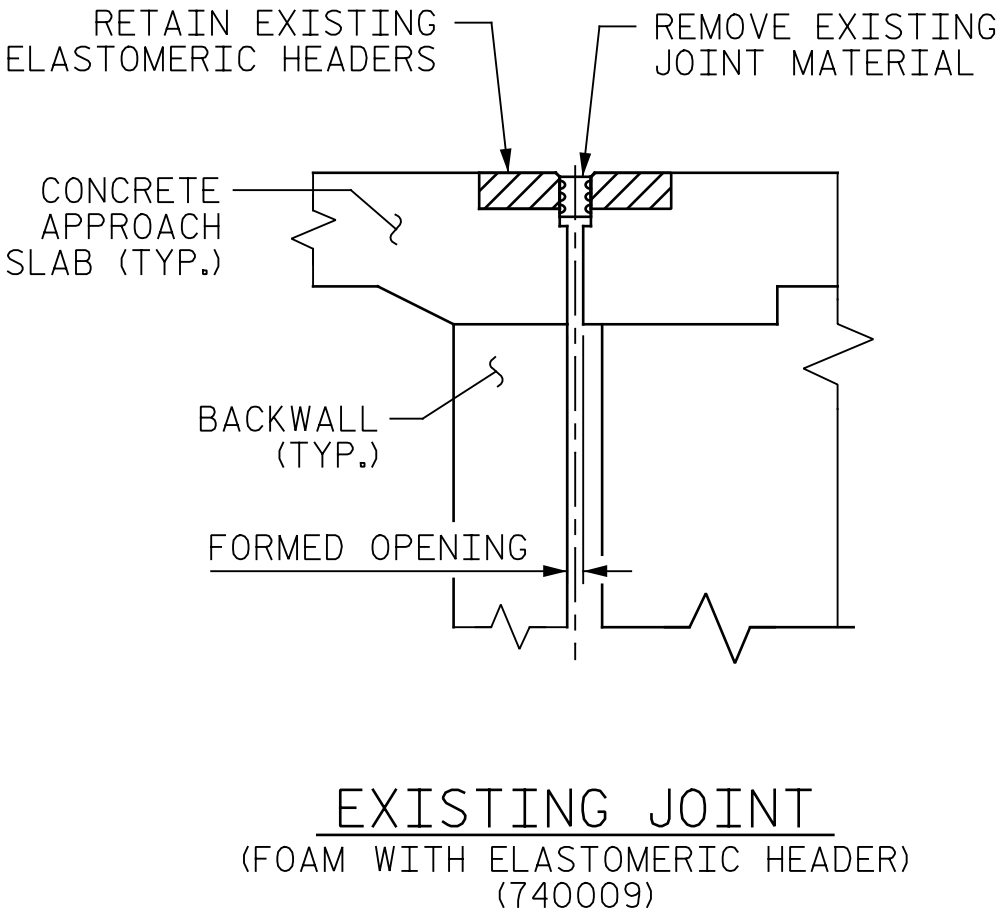
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



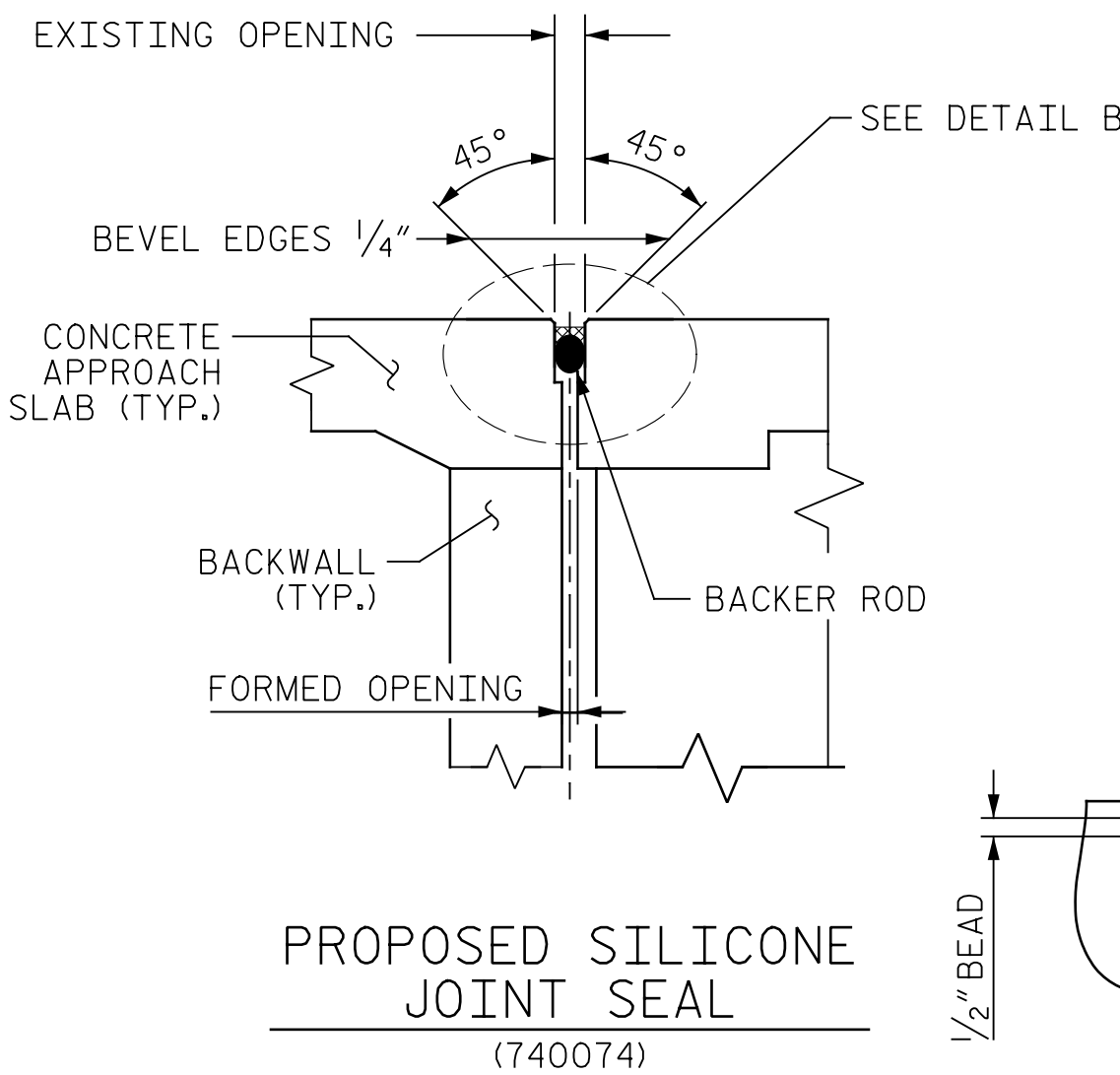
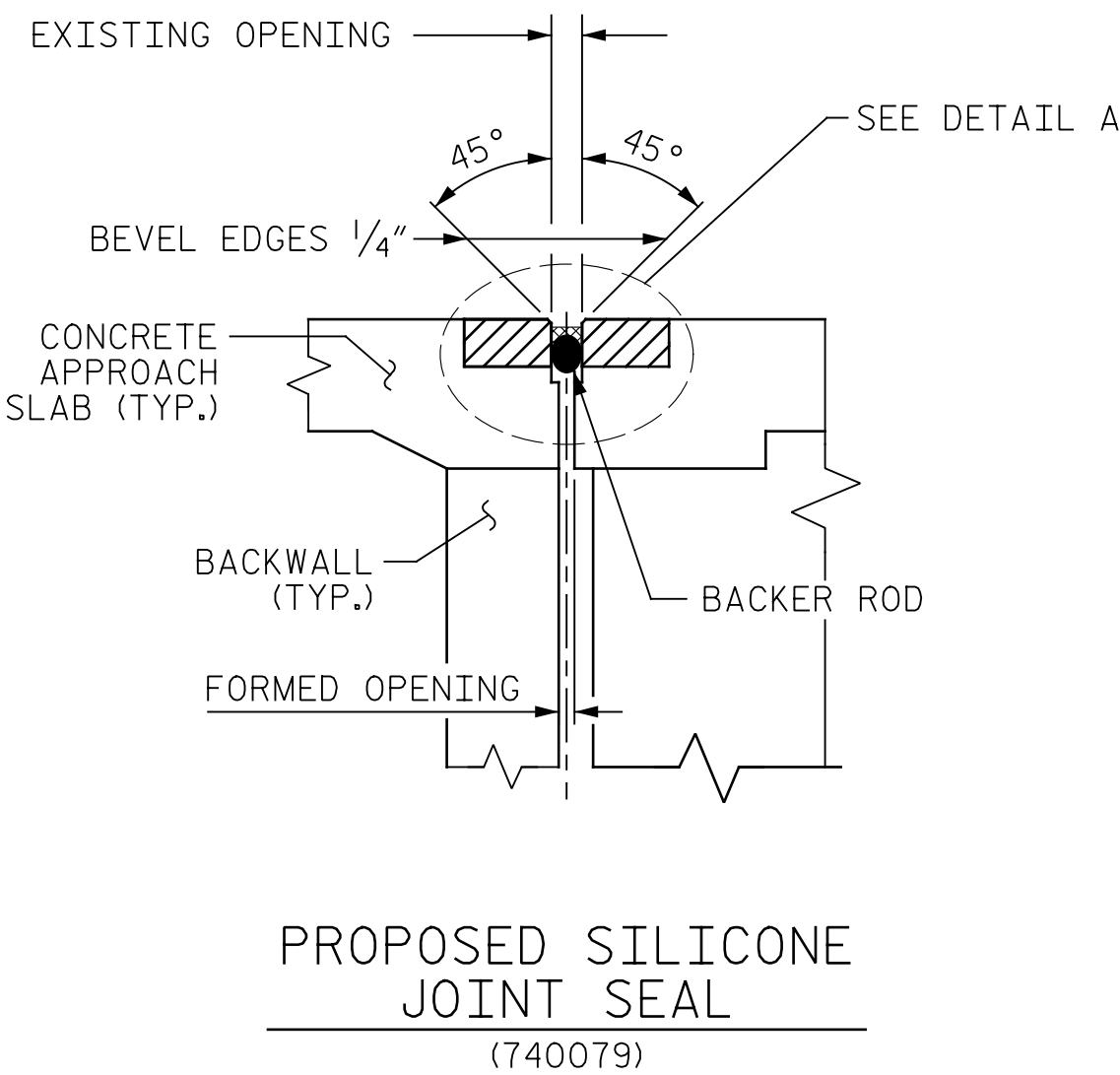
DocuSigned by:
Eric B. Nelson
4/3/2018

DEPARTMENT OF TRANSPORTATION RALEIGH						REVISIONS			SHEET NO.	
JOINT DETAIL FOR SILICONE JOINT SEAL WITH ELASTOMERIC HEADER						NO.	BY:	DATE:	S-132	
						1			TOTAL SHEETS	
						2			142	

NOTES
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

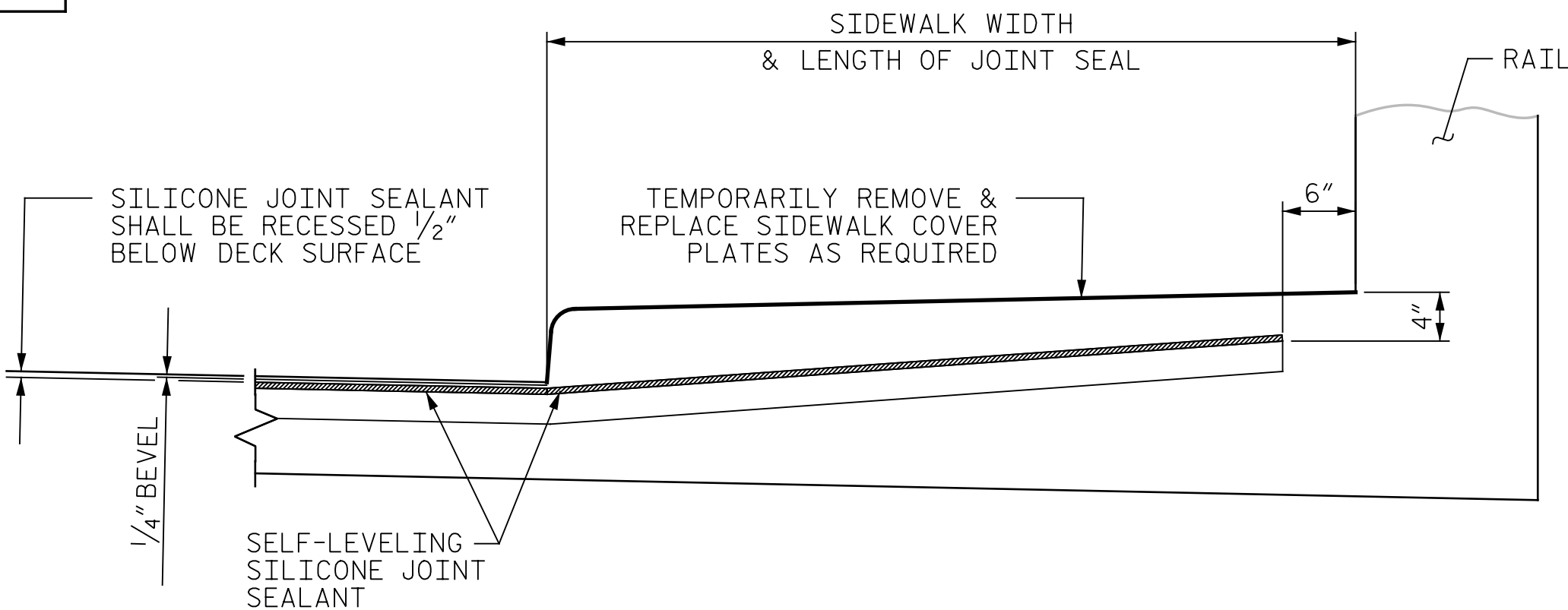


EXISTING JOINT TYPES

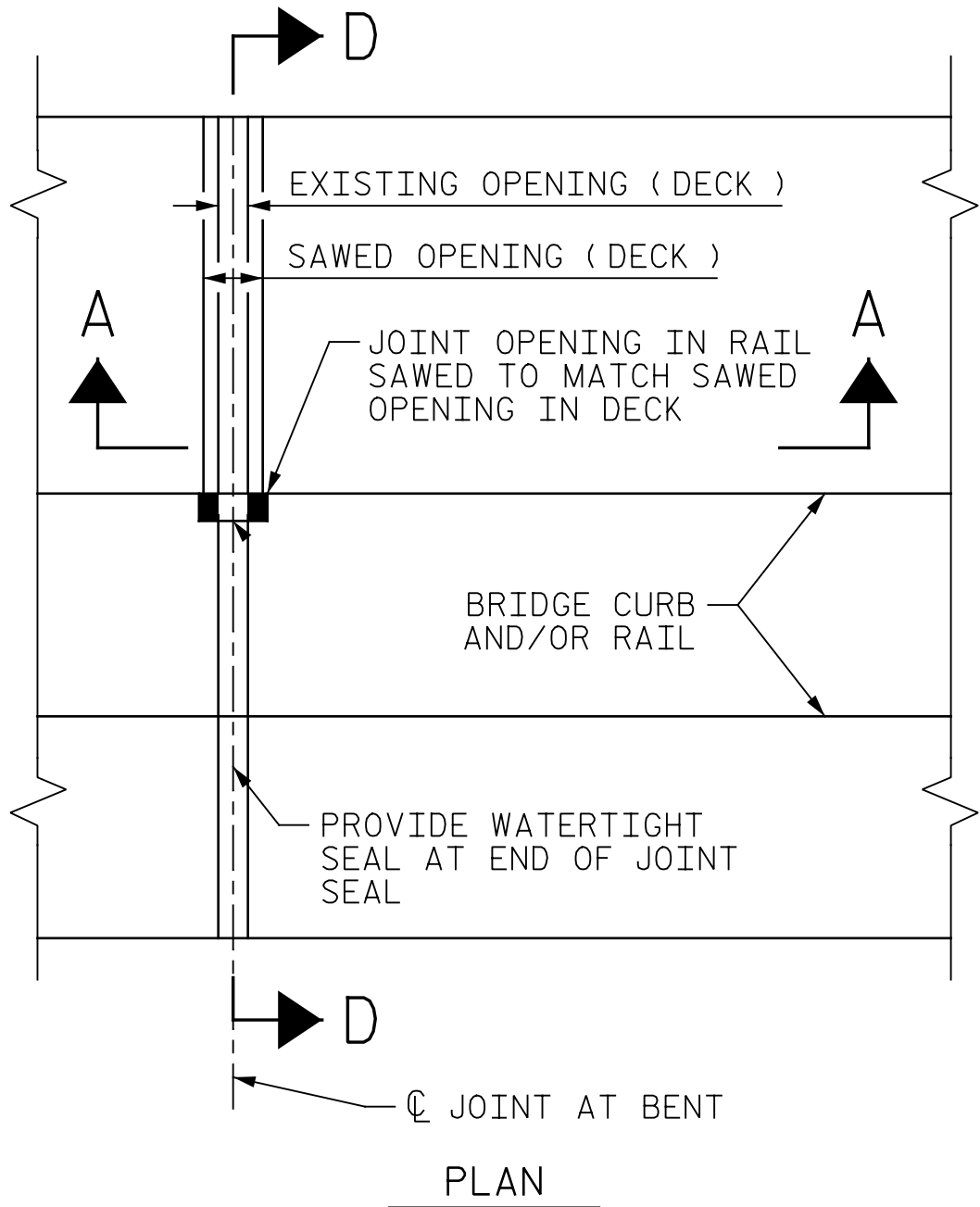


SECTION A-A
PROPOSED JOINT

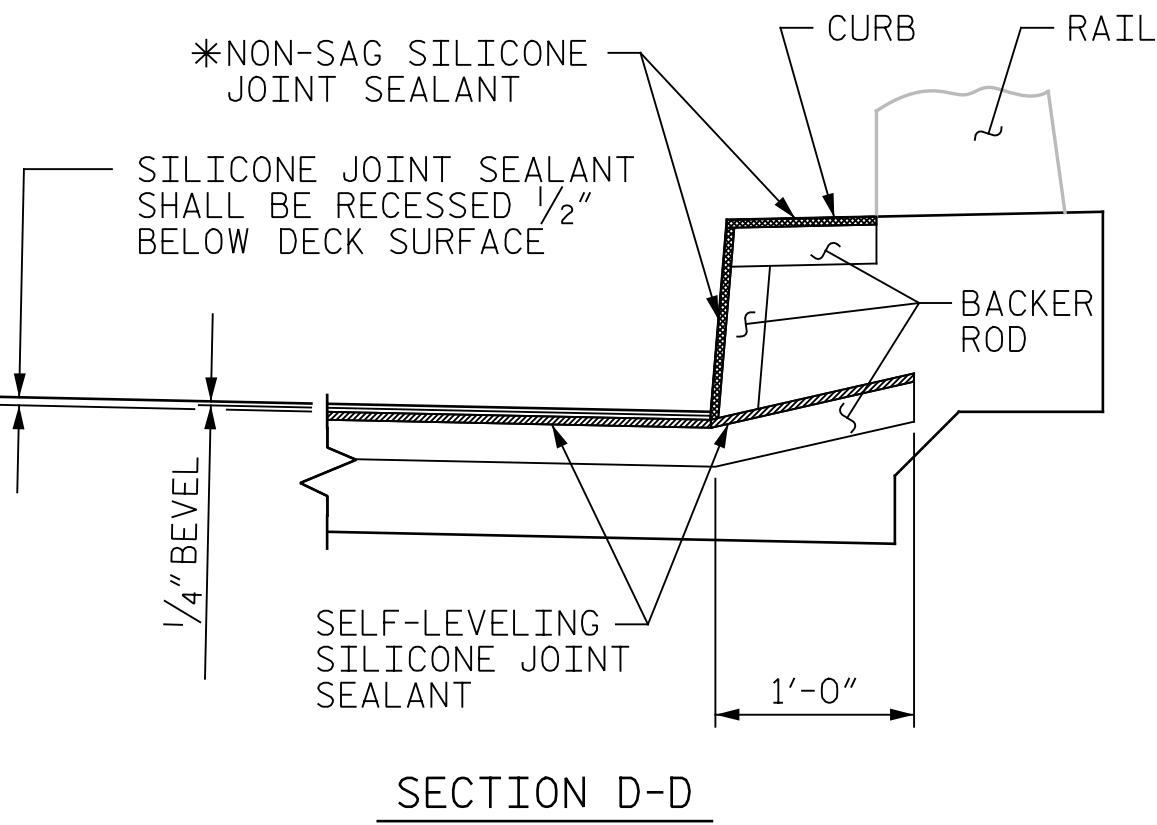
	SILICONE JOINT SEAL (LF)		
BRIDGE NO.	EB 1	BENT 1	EB 2
860009	35.0	-	-
860074	75.0	-	32.5



JOINT SEAL DETAILS AT SIDEWALK



*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 9, 74



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL FOR SILICONE JOINT SEAL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-133					TOTAL SHEETS 142

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

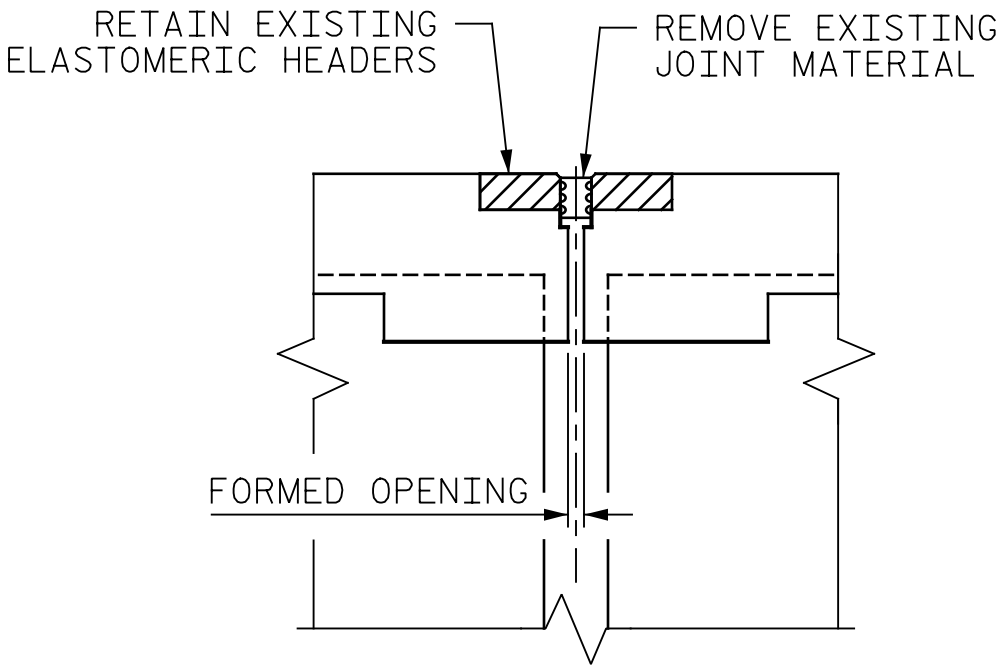
PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
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NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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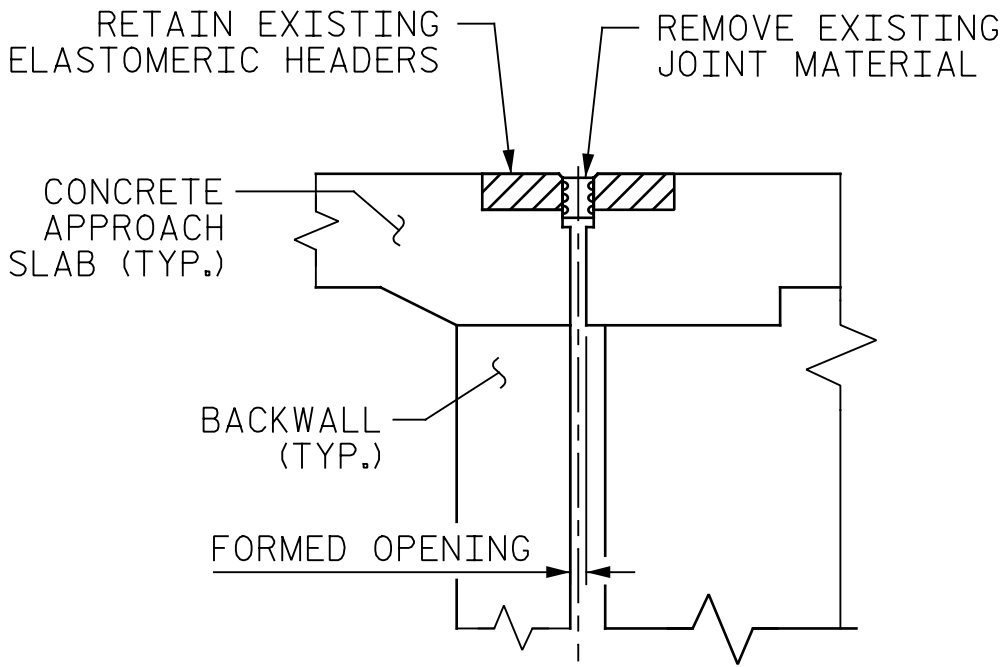
NOTES

FOR SYNTHETIC RUBBER JOINT SEAL, SEE SPECIAL PROVISIONS.

PROVIDE JOINT SEALS AT BENT 1 AND END BENT 2 WITH A MOVEMENT RATING OF 5".

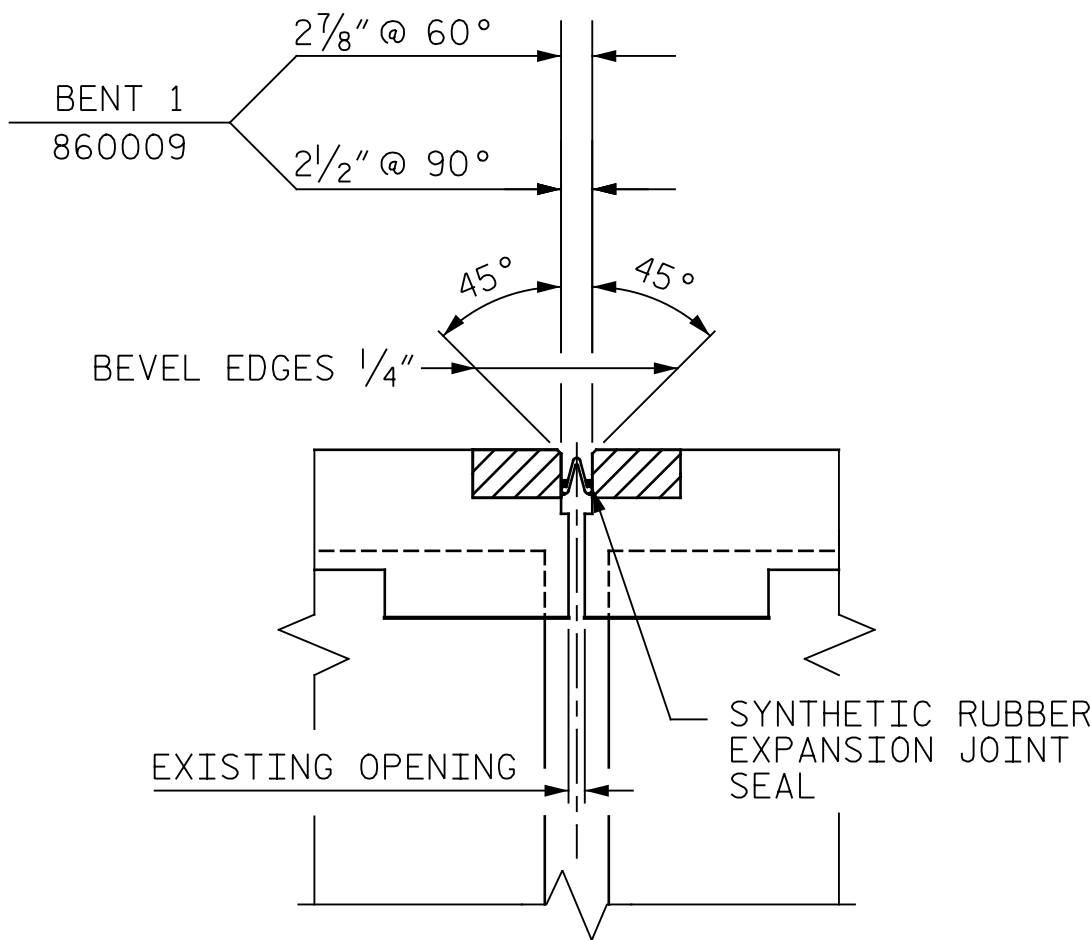


EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)

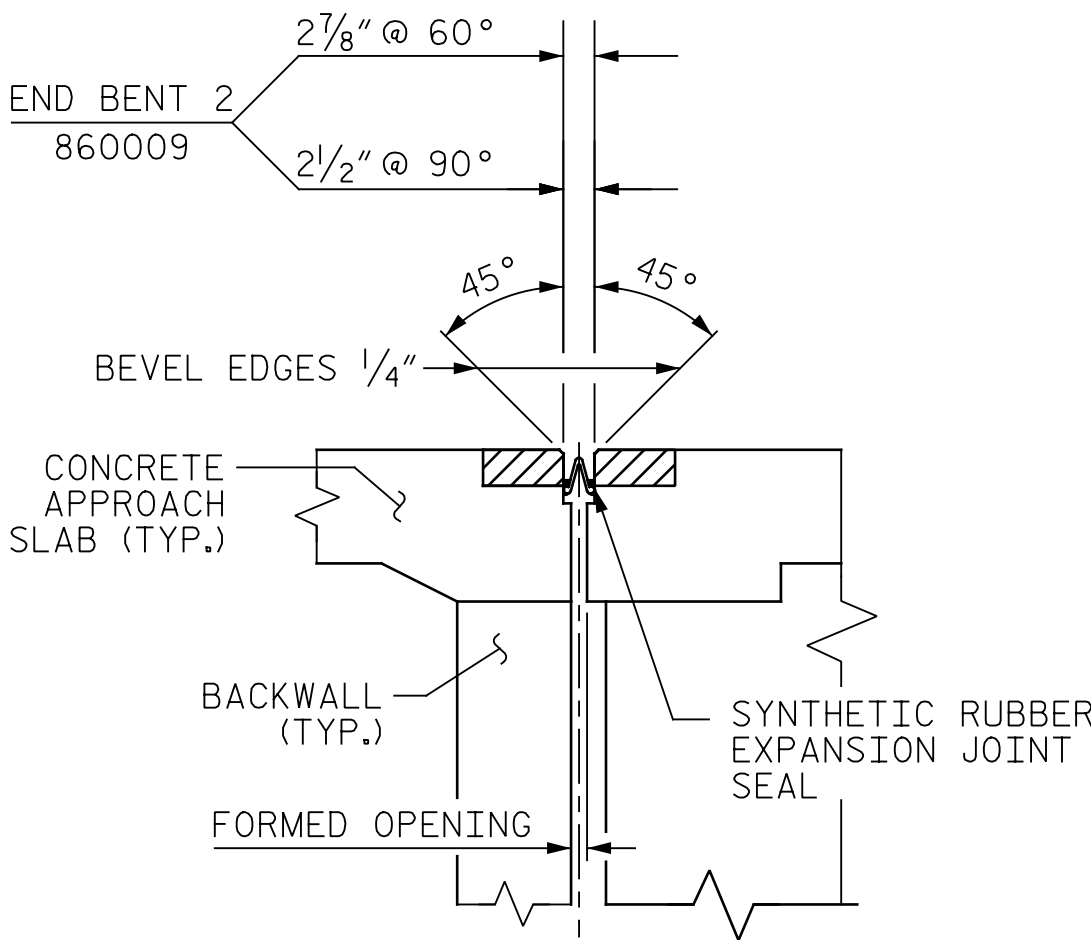


EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)

EXISTING JOINT TYPES



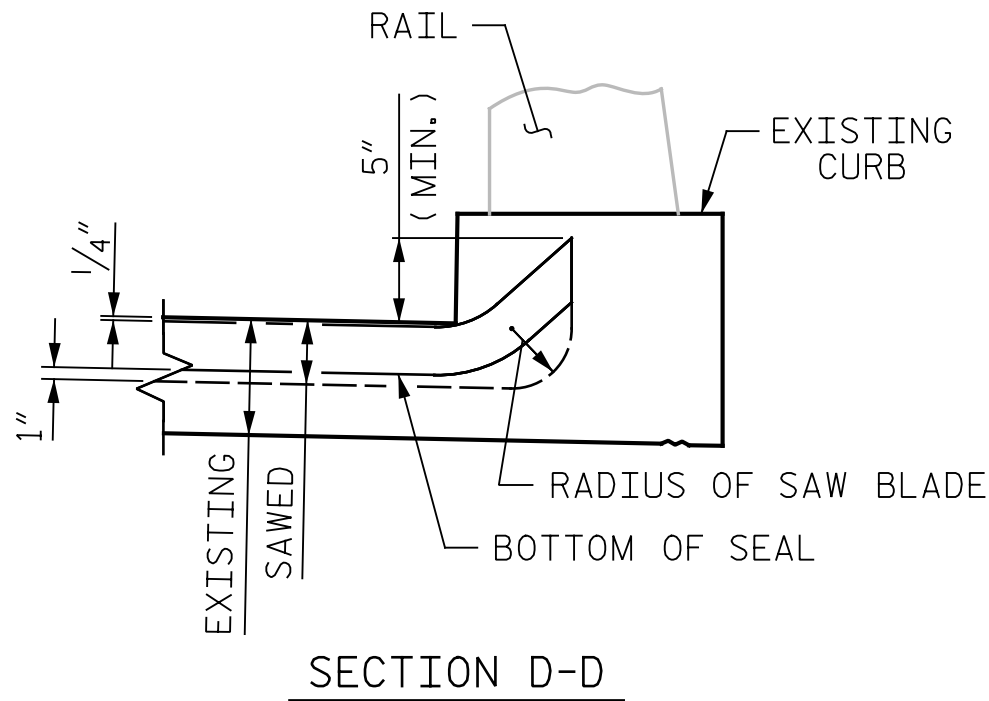
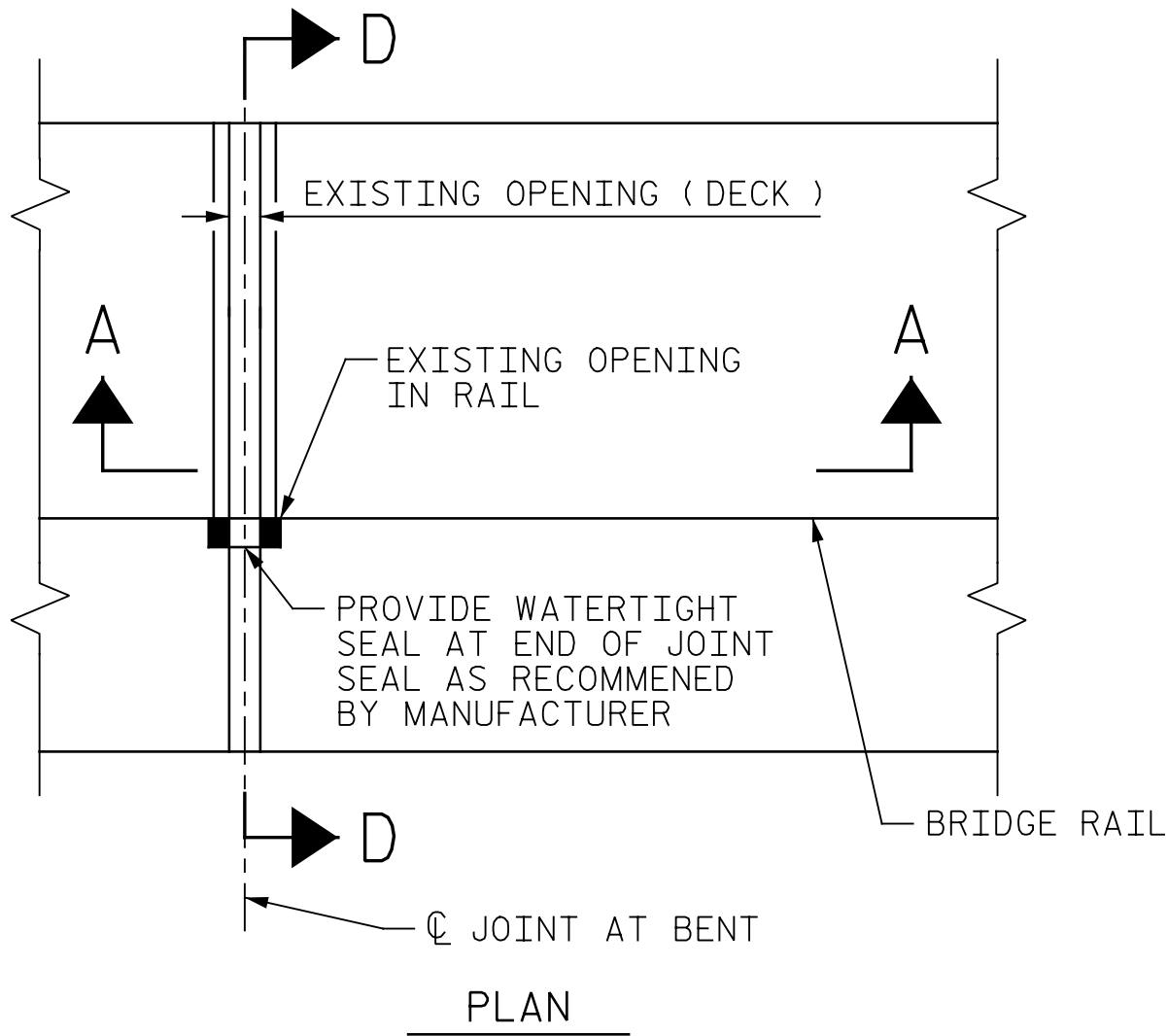
PROPOSED SYNTHETIC RUBBER JOINT SEAL



PROPOSED SYNTHETIC RUBBER JOINT SEAL

SECTION A-A
PROPOSED JOINT

SYNTHETIC RUBBER JOINT SEAL (LF)			
BRIDGE NO.	EB 1	BENT 1	EB 2
860009	-	34.0	34.0



JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 9



DocuSigned by:
Eric B. Nelson 4/3/2018
BAGP917K2D704A...

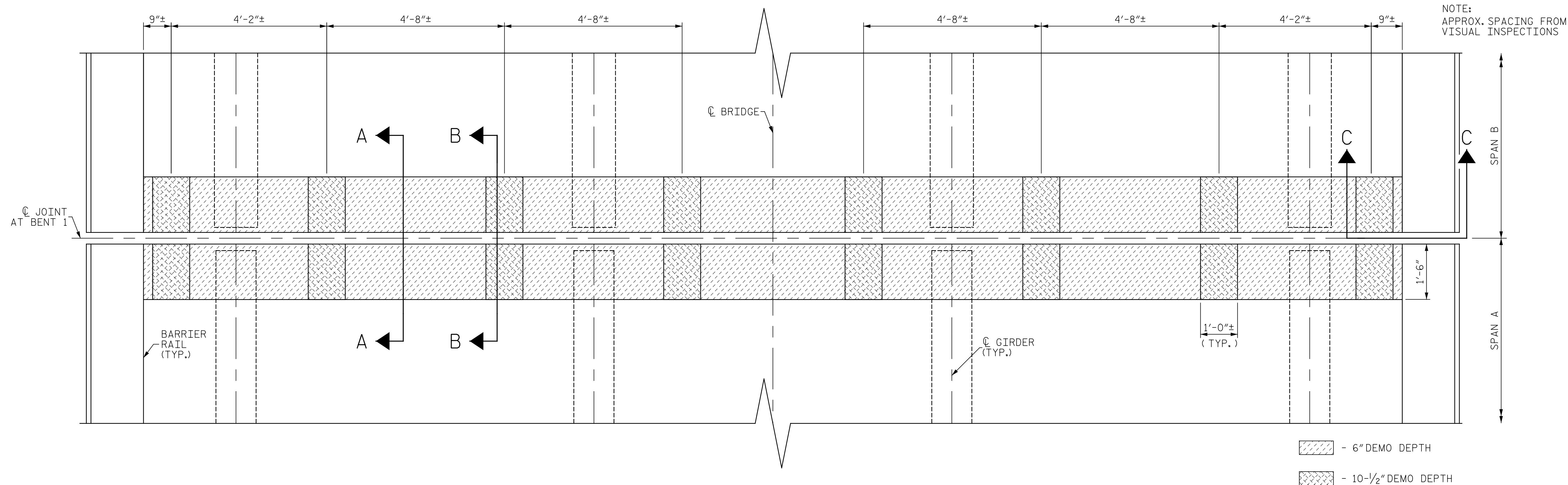
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL FOR SYNTHETIC RUBBER JOINT SEAL					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					142

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

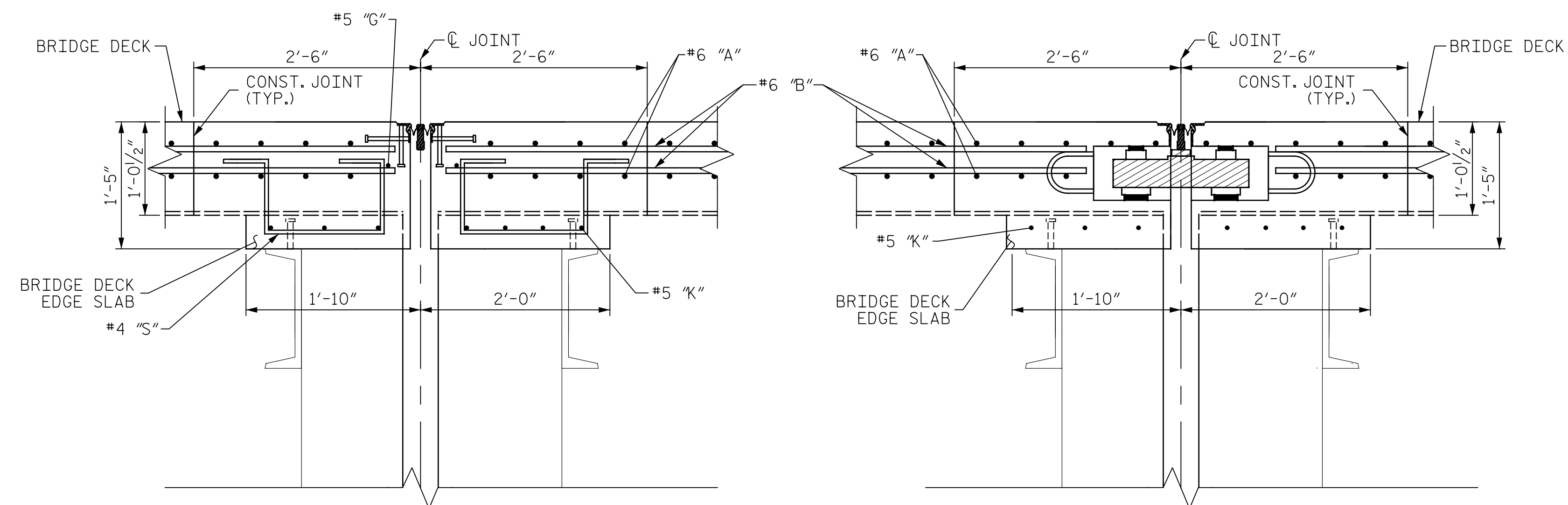
PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
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(919) 420-7660
NC Lic. No. F-0270

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PLAN VIEW OF MODULAR JOINT DEMOLITION AT BENT 1



SECTION A-A
(BETWEEN SUPPORT BOXES)

SECTION B-B
(AT SUPPORT BOXES)

EXISTING JOINT AT BENT 1

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 186

SHEET 1 OF 4



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

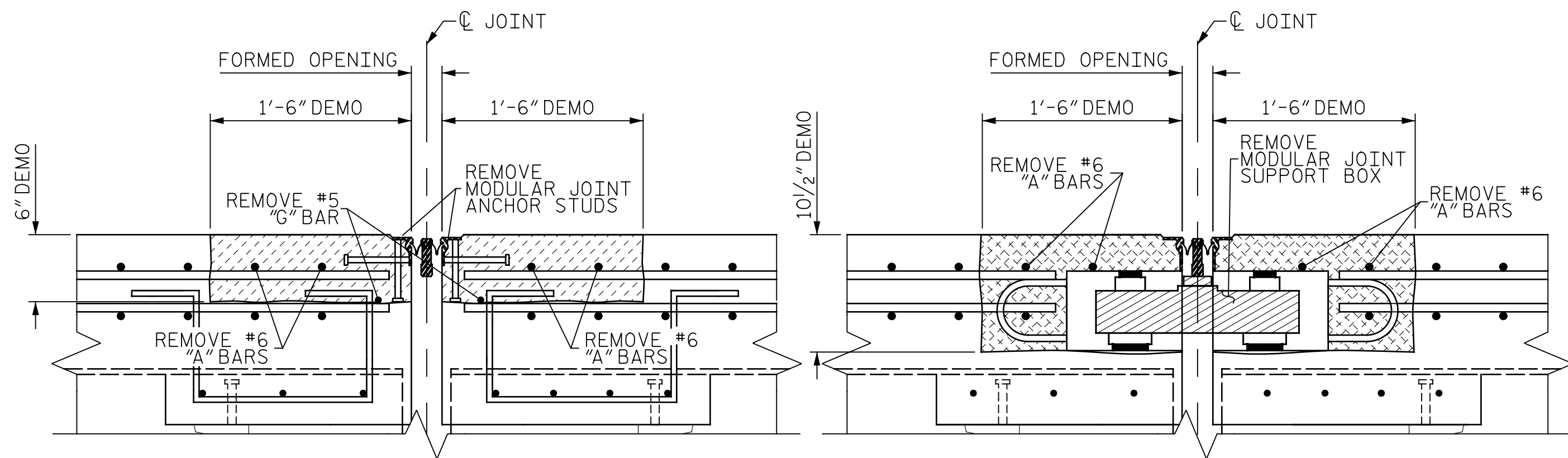
JOINT DETAIL
FOR MODULAR JOINT
REPLACEMENT WITH
SYNTHETIC RUBBER
JOINT SEAL

REVISIONS						SHEET NO. S-135
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

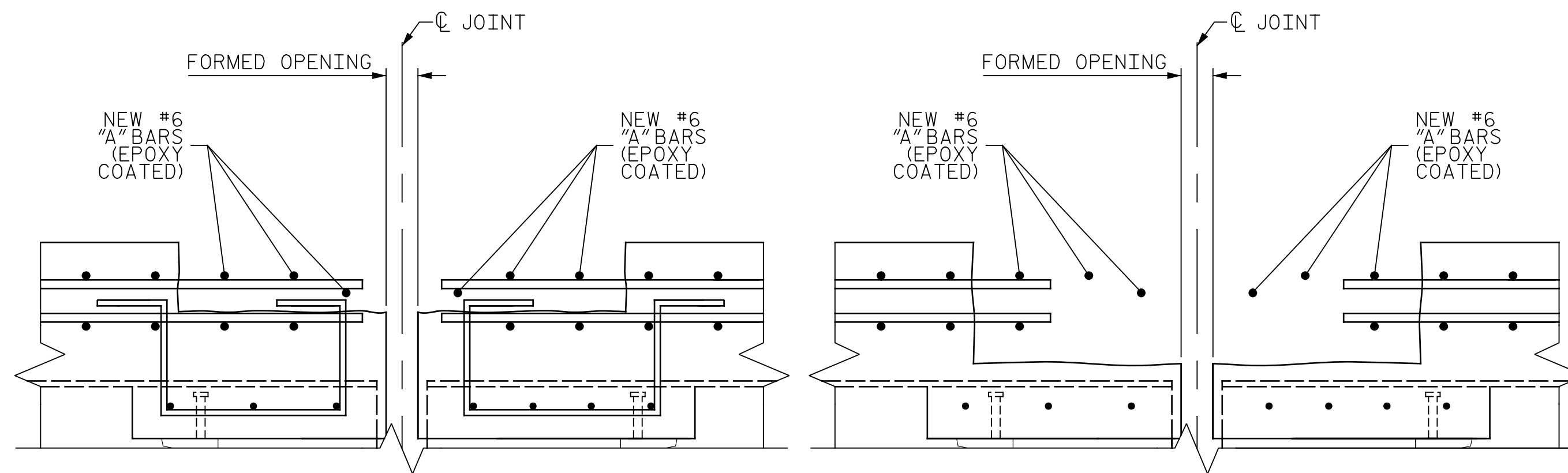
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



SECTION A-A
(BETWEEN SUPPORT BOXES)

SECTION B-B
(AT SUPPORT BOXES)

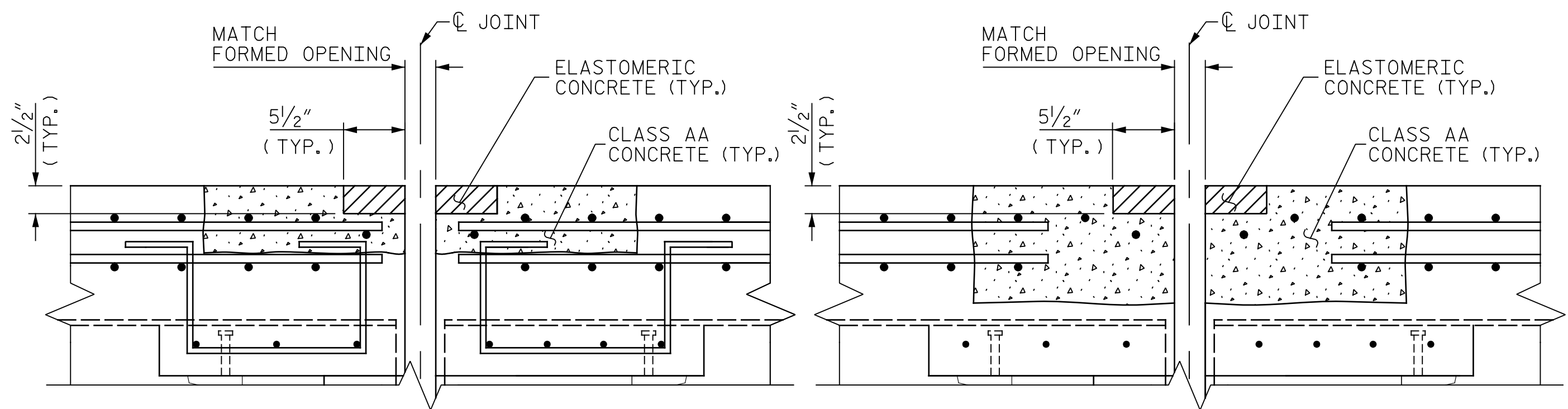
MINIMUM EXISTING
JOINT DEMOLITION



SECTION A-A
(BETWEEN SUPPORT BOXES)

SECTION B-B
(AT SUPPORT BOXES)

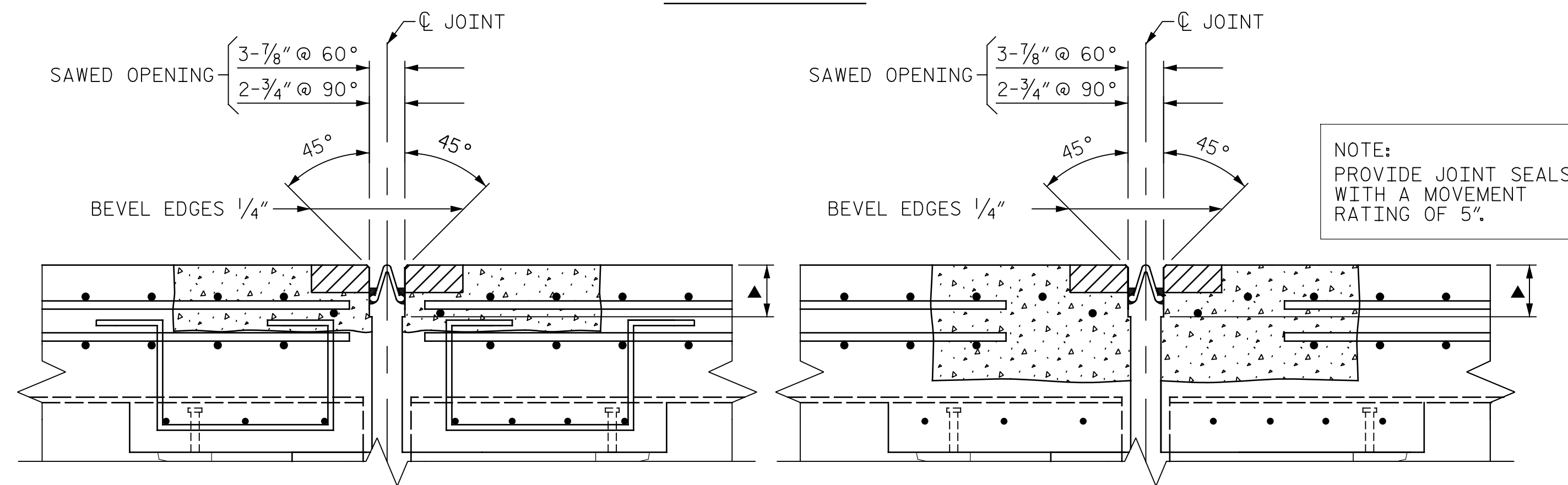
DETAIL
FOR R/F STEEL



SECTION A-A
(BETWEEN SUPPORT BOXES)

SECTION B-B
(AT SUPPORT BOXES)

PROPOSED JOINT
PRE-SAWED DIMENSIONS



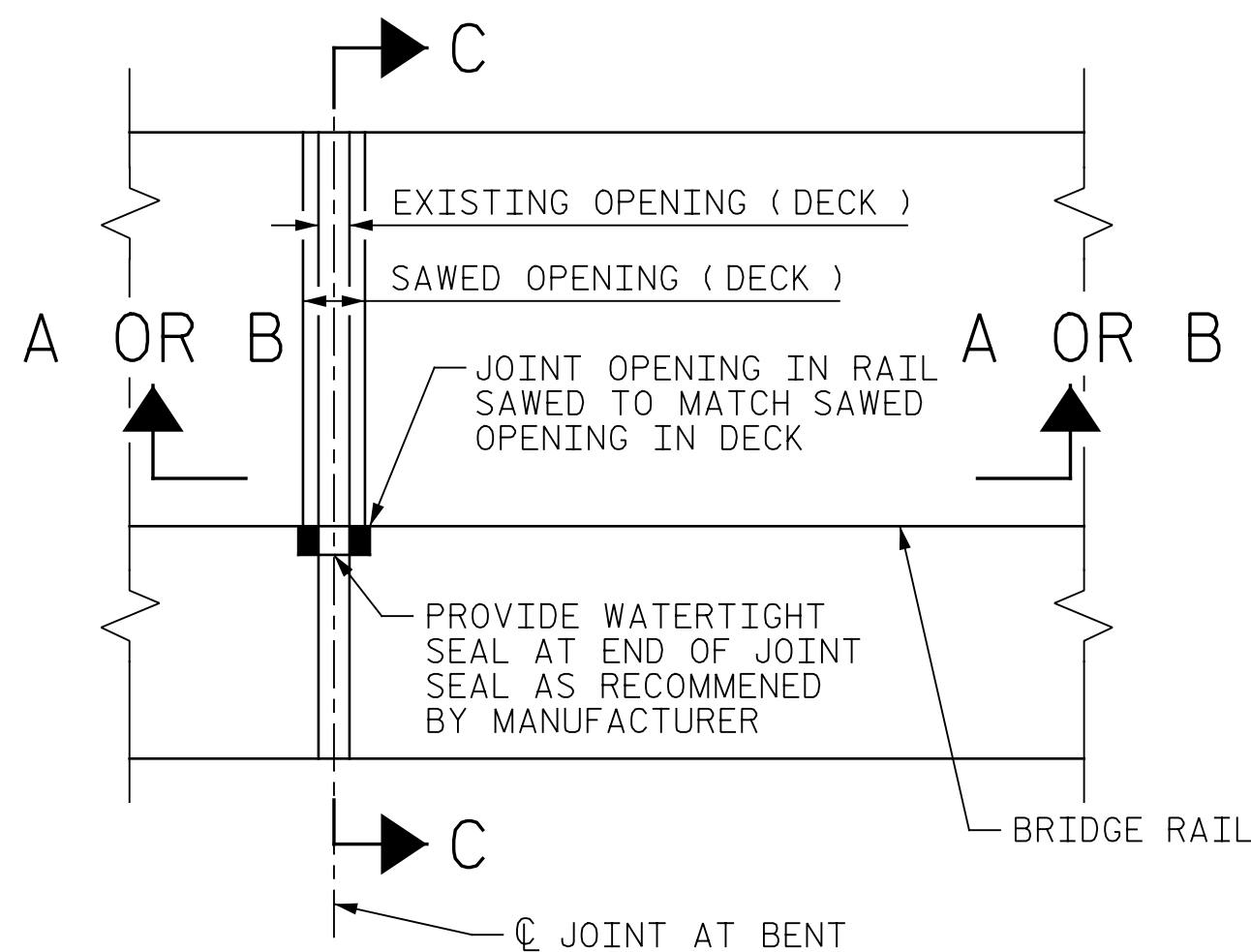
SECTION A-A
(BETWEEN SUPPORT BOXES)

SECTION B-B
(AT SUPPORT BOXES)

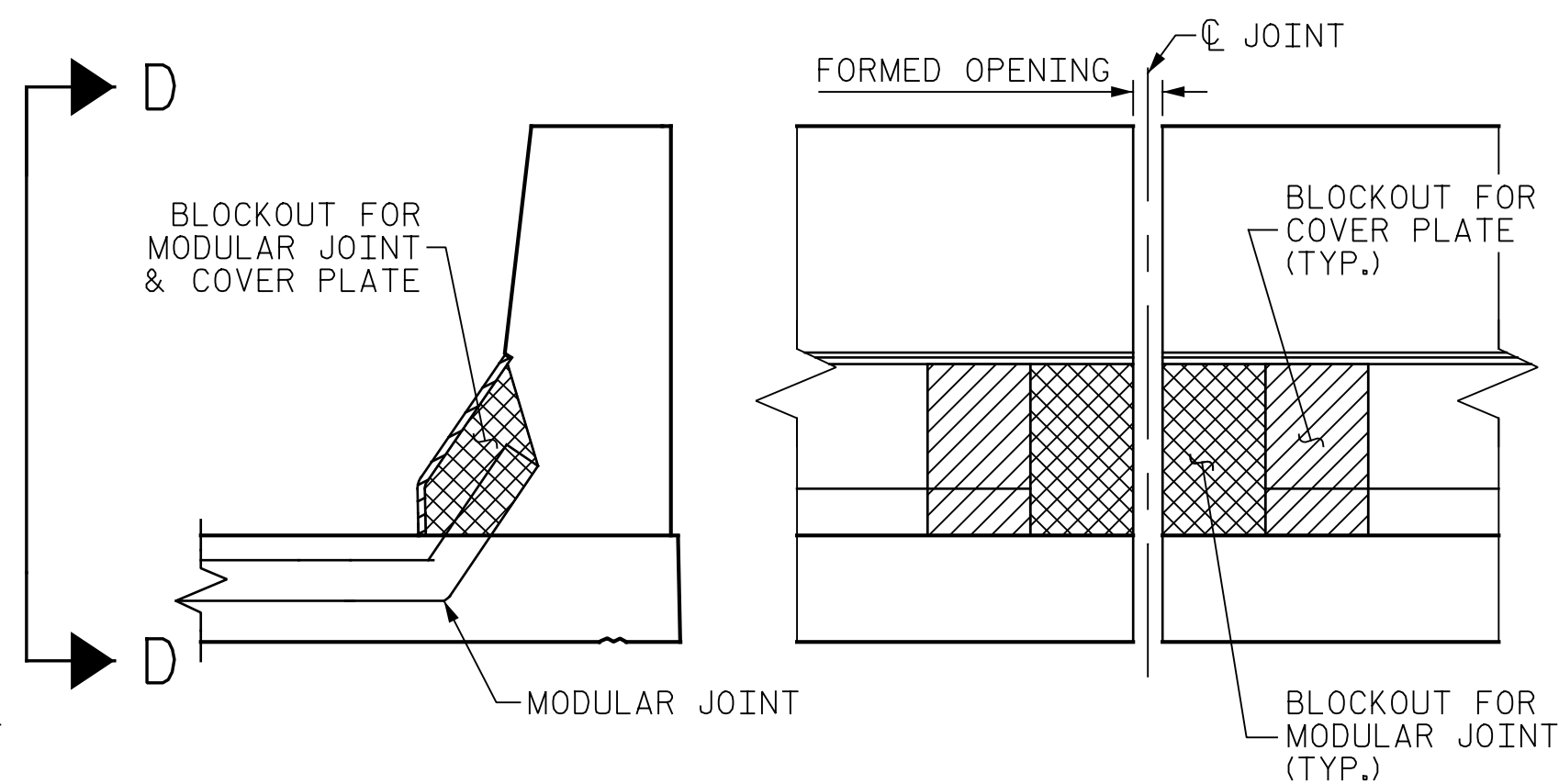
PROPOSED JOINT
WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE 3/4"
BELOW THE BOTTOM OF
THE BACKER ROD. SEE
MANUFACTURER
RECOMMENDATIONS

MODULAR JOINT REPLACEMENT AT BENT 1



PLAN VIEW
AT BARRIER RAIL



SECTION C-C

SECTION D-D

JOINT SEAL DETAILS AT BARRIER

SEQUENCE:

- 1) REMOVE COVER PLATE.
- 2) COMPLETELY REMOVE MODULAR JOINT COMPONENTS.
- 3) EXCAVATE CONCRETE IN COVER PLATE BLOCKOUT TO A MINIMUM DEPTH OF 3".
- 4) FORM & POUR CLASS AA CONCRETE TO MATCH BARRIER RAIL LINES AND FORMED OPENING.

BILL OF MATERIAL FOR BENT 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A	12	#6	STR	17'-9"	320
EPOXY COATED REINFORCING STEEL				320 LBS	
CLASS AA CONCRETE				2.2 CY	
ELASTOMERIC CONCRETE				6.5 CF	

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 186

SHEET 2 OF 4



Designed by:
Eric B. Nelson 4/3/2018
BAPR1762D7044A...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

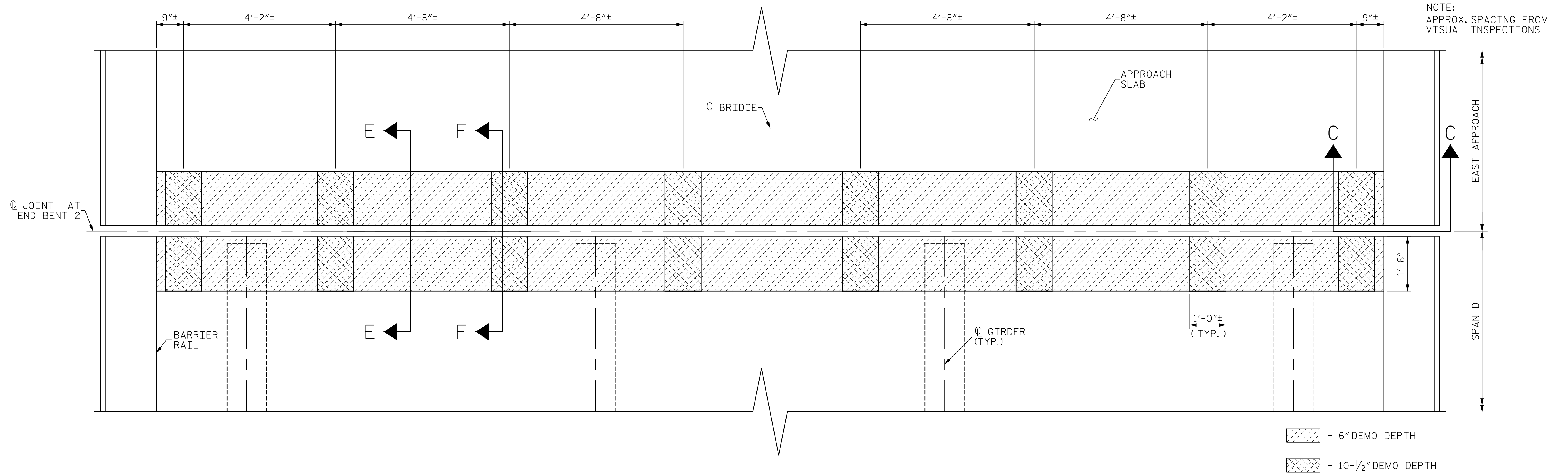
JOINT DETAIL
FOR MODULAR JOINT
REPLACEMENT WITH
SYNTHETIC RUBBER
JOINT SEAL

REVISIONS						SHEET NO. S-136
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

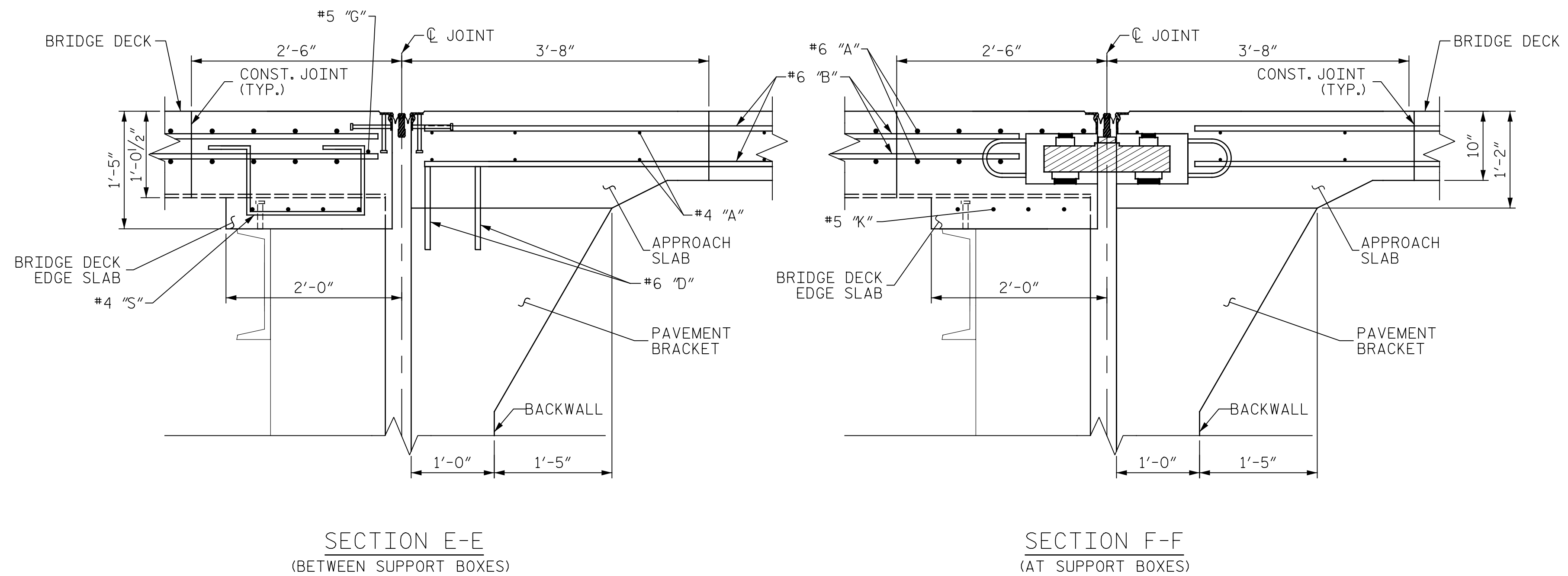
DRAWN BY: M. SPENCER DATE: 2/2018
CHECKED BY: R. NELSON DATE: 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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PLAN VIEW OF MODULAR JOINT DEMOLITION AT END BENT 2



EXISTING JOINT AT END BENT 2

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 186

SHEET 3 OF 4



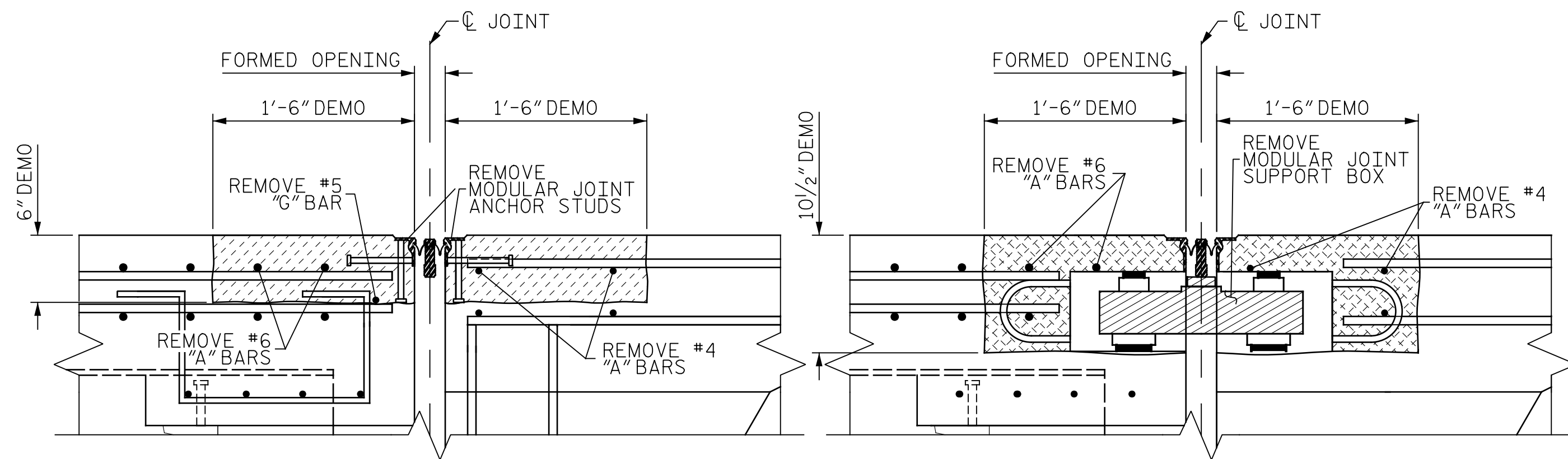
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
JOINT DETAIL
FOR MODULAR JOINT
REPLACEMENT WITH
SYNTHETIC RUBBER
JOINT SEAL

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
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2610 Wycliff Road
Suite 102
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NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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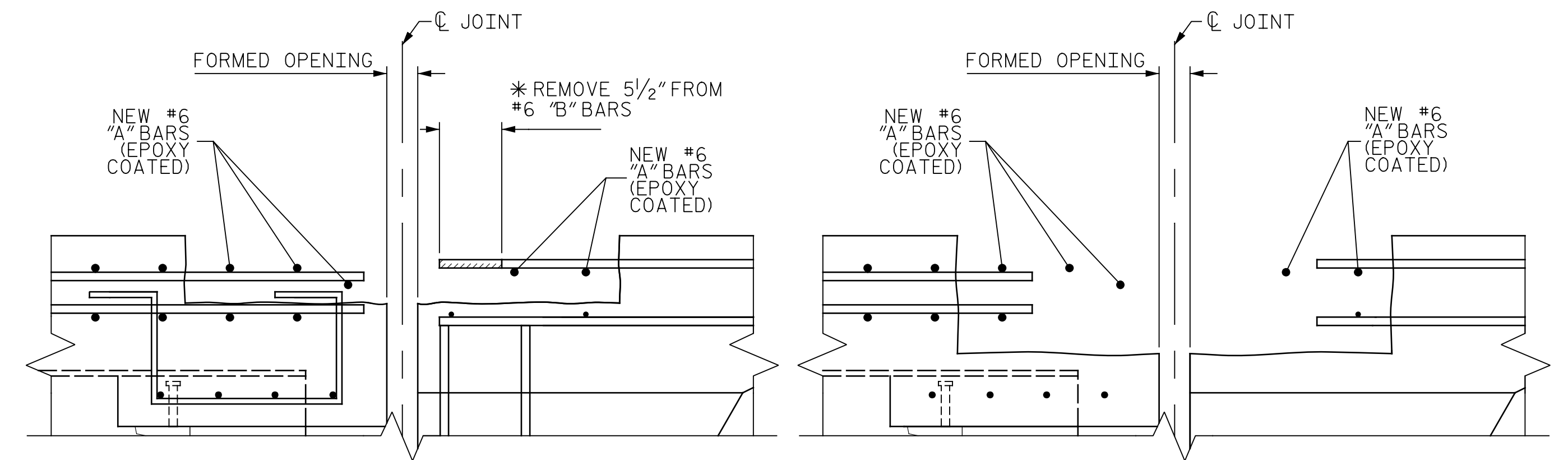
REVISIONS						SHEET NO. S-137
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



SECTION E-E
(BETWEEN SUPPORT BOXES)

SECTION F-F
(AT SUPPORT BOXES)

MINIMUM EXISTING
JOINT DEMOLITION

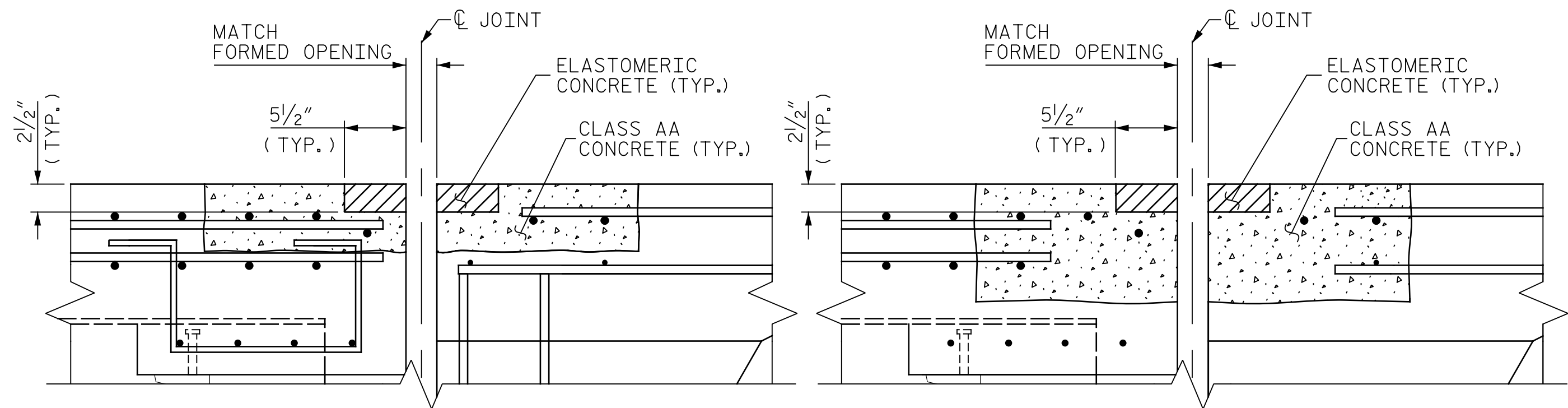


* APPLIES ONLY TO
APPROACH SIDE,
BETWEEN SUPPORT
BOXES

SECTION E-E
(BETWEEN SUPPORT BOXES)

SECTION F-F
(AT SUPPORT BOXES)

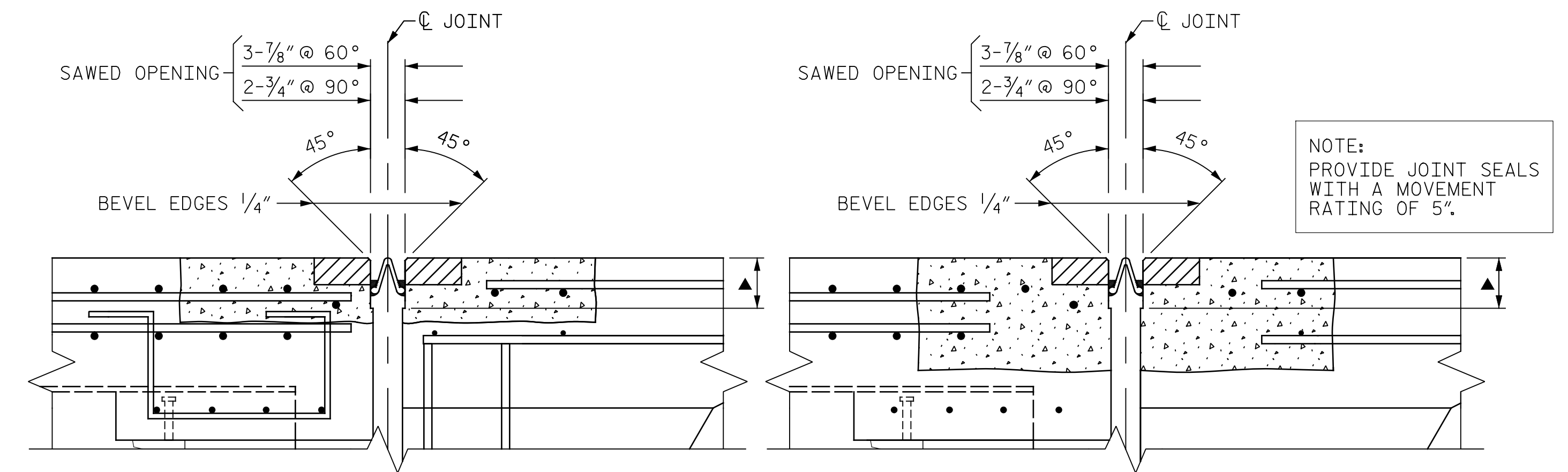
DETAIL
FOR R/F STEEL



SECTION E-E
(BETWEEN SUPPORT BOXES)

SECTION F-F
(AT SUPPORT BOXES)

PROPOSED JOINT
PRE-SAWED DIMENSIONS



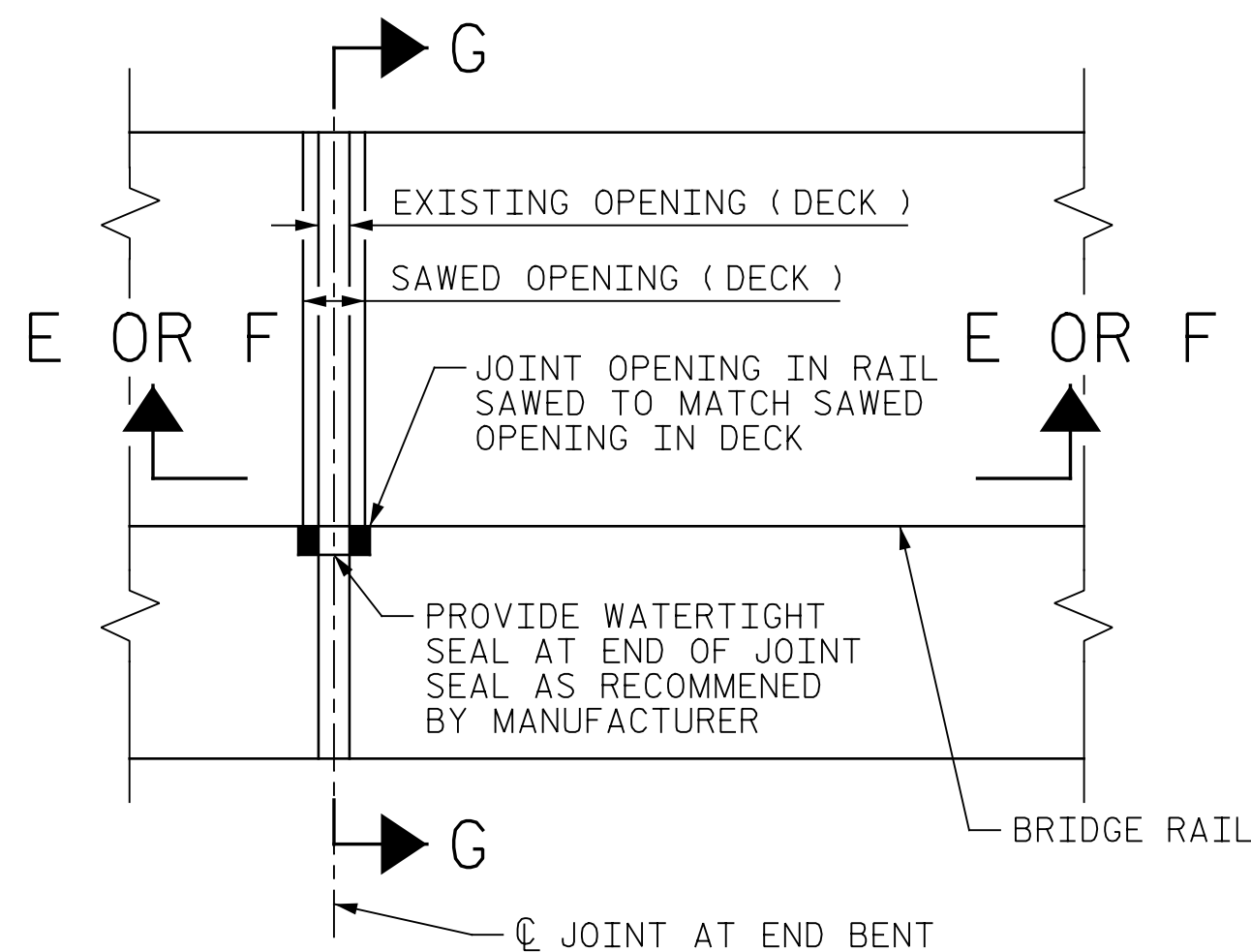
SECTION E-E
(BETWEEN SUPPORT BOXES)

SECTION F-F
(AT SUPPORT BOXES)

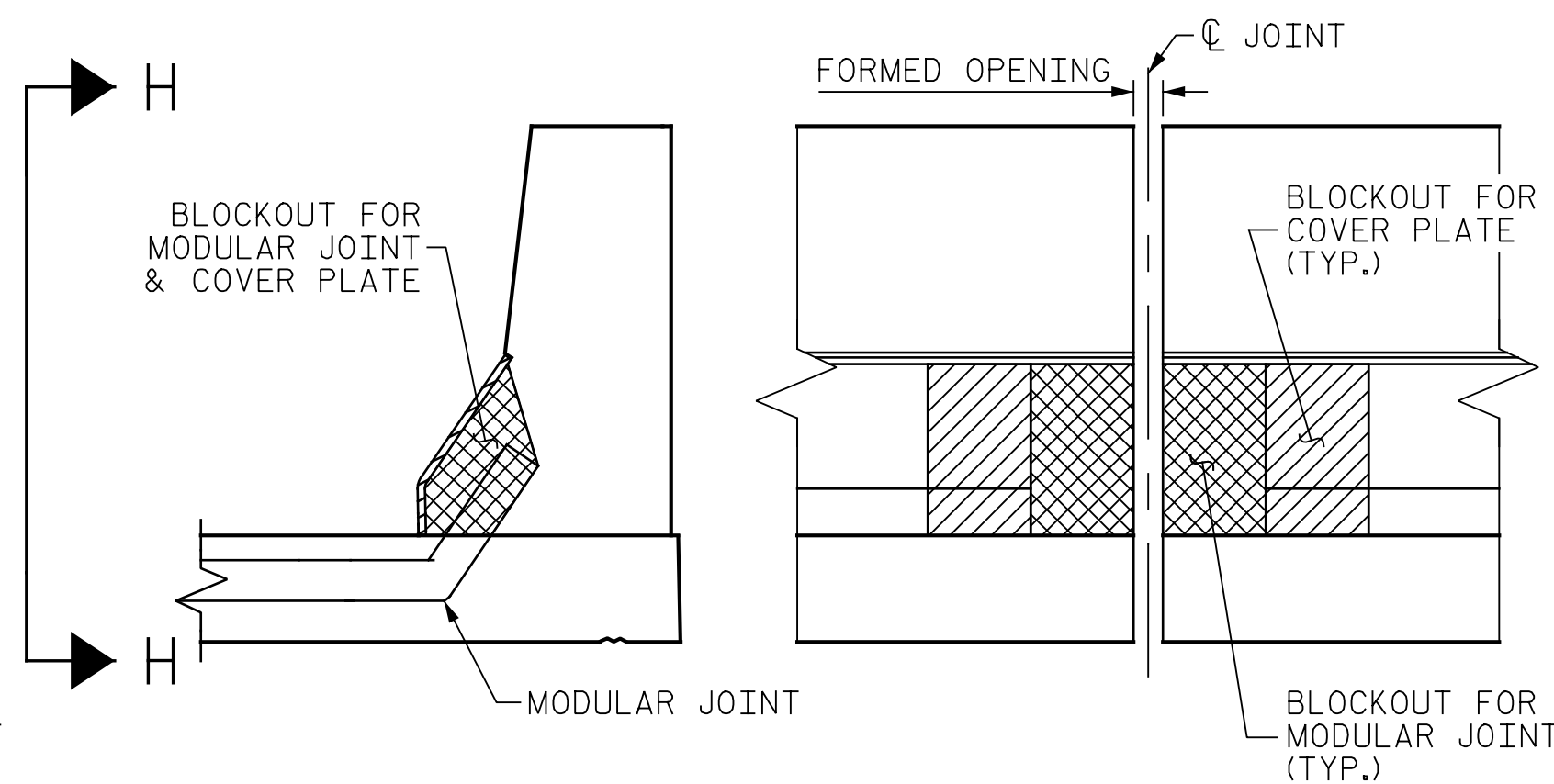
PROPOSED JOINT
WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE 3/4"
BELOW THE BOTTOM OF
THE BACKER ROD. SEE
MANUFACTURER
RECOMMENDATIONS

MODULAR JOINT REPLACEMENT AT END BENT 2



PLAN VIEW
AT BARRIER RAIL



SECTION G-G

SECTION H-H

JOINT SEAL DETAILS AT BARRIER

SEQUENCE:

- 1) REMOVE COVER PLATE.
- 2) COMPLETELY REMOVE MODULAR JOINT COMPONENTS.
- 3) EXCAVATE CONCRETE IN COVER PLATE BLOCKOUT TO A MINIMUM DEPTH OF 3".
- 4) FORM & POUR CLASS AA CONCRETE TO MATCH BARRIER RAIL LINES AND FORMED OPENING.

BILL OF MATERIAL
FOR END BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A	10	#6	STR	17'-9"	267
EPOXY COATED REINFORCING STEEL					267 LBS
CLASS AA CONCRETE					2.2 CY
ELASTOMERIC CONCRETE					6.5 CF

PROJECT NO. 14BPR.3.1
SWAIN COUNTY
BRIDGE NO. 186

SHEET 4 OF 4



Designed by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

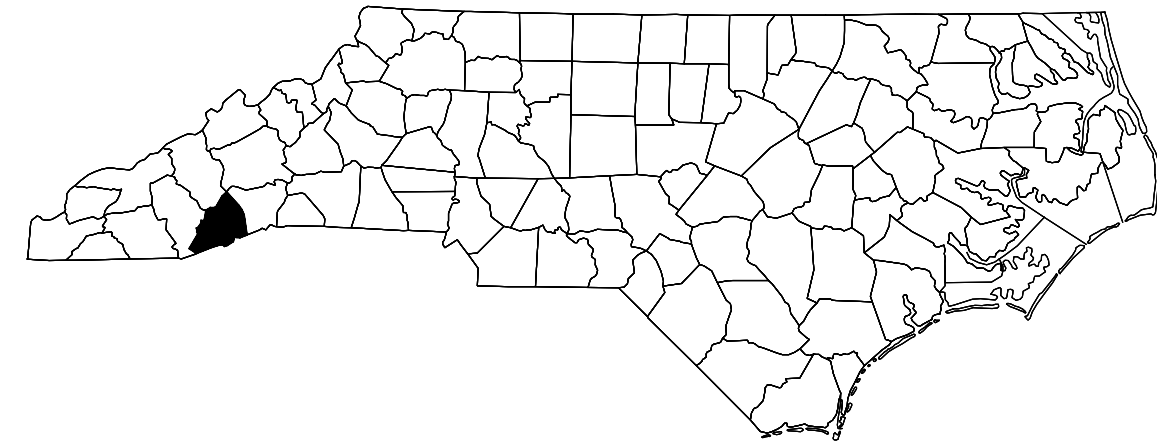
JOINT DETAIL
FOR MODULAR JOINT
REPLACEMENT WITH
SYNTHETIC RUBBER
JOINT SEAL

REVISIONS					SHEET NO. S-138
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 142
2			4		

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



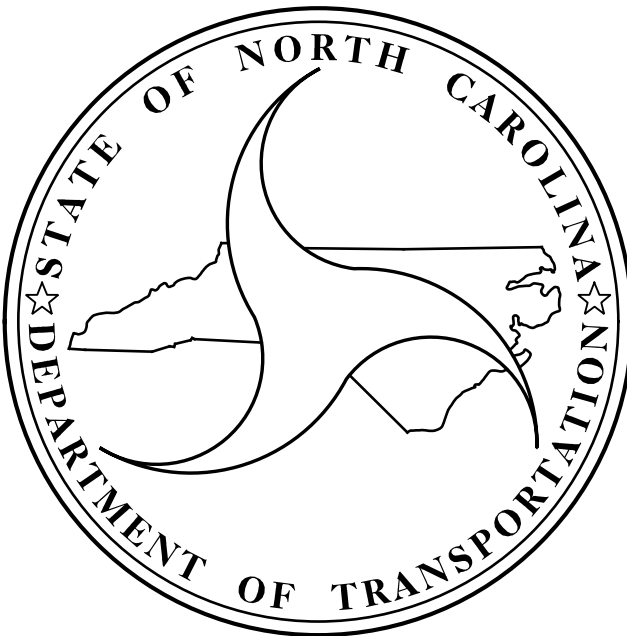
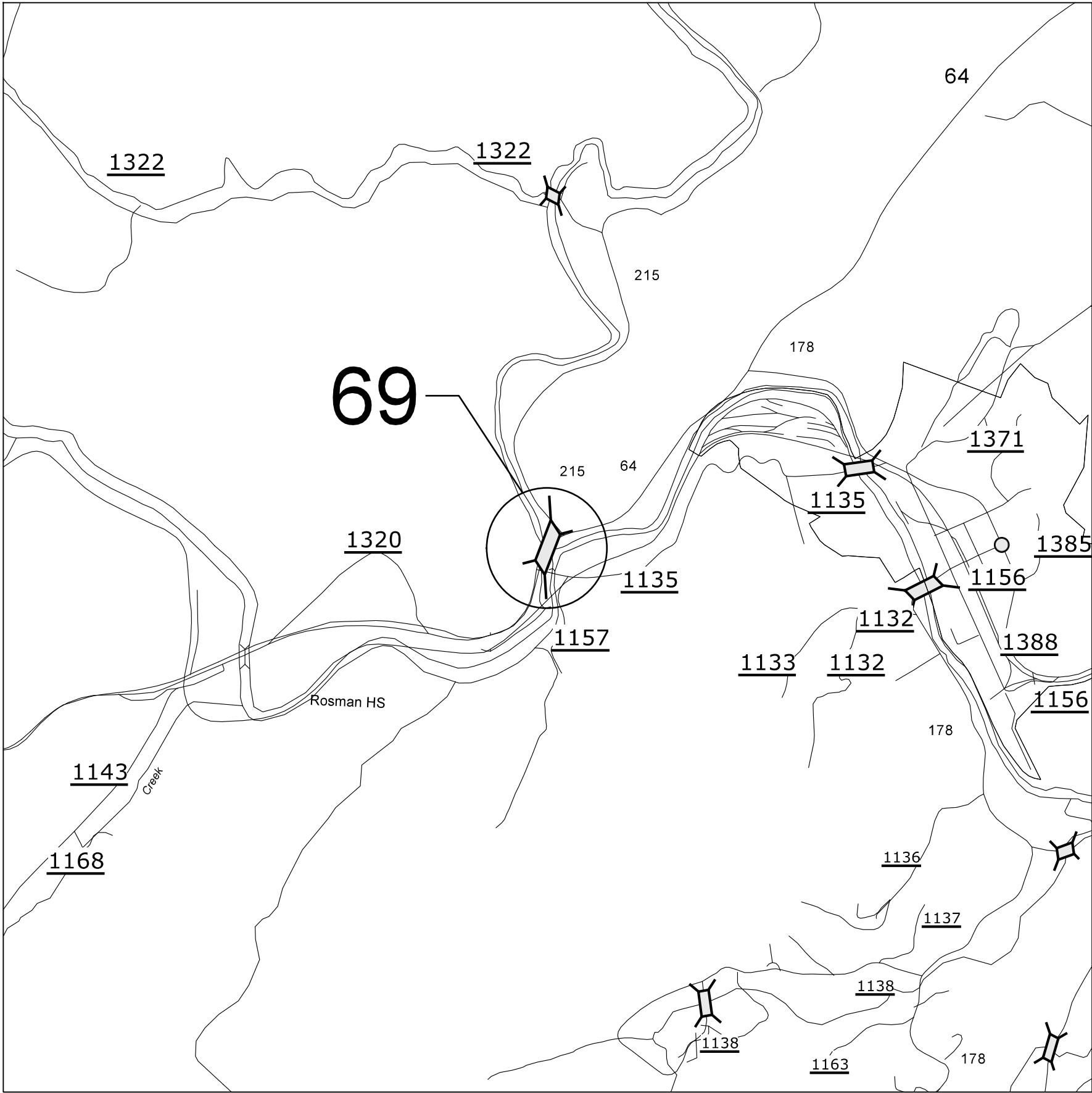
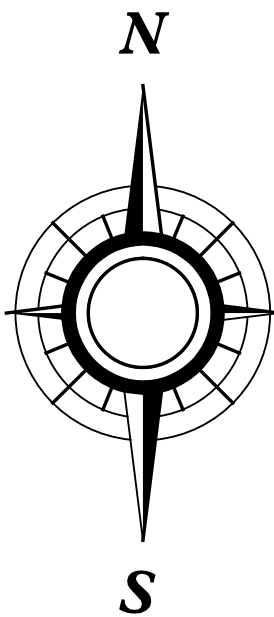
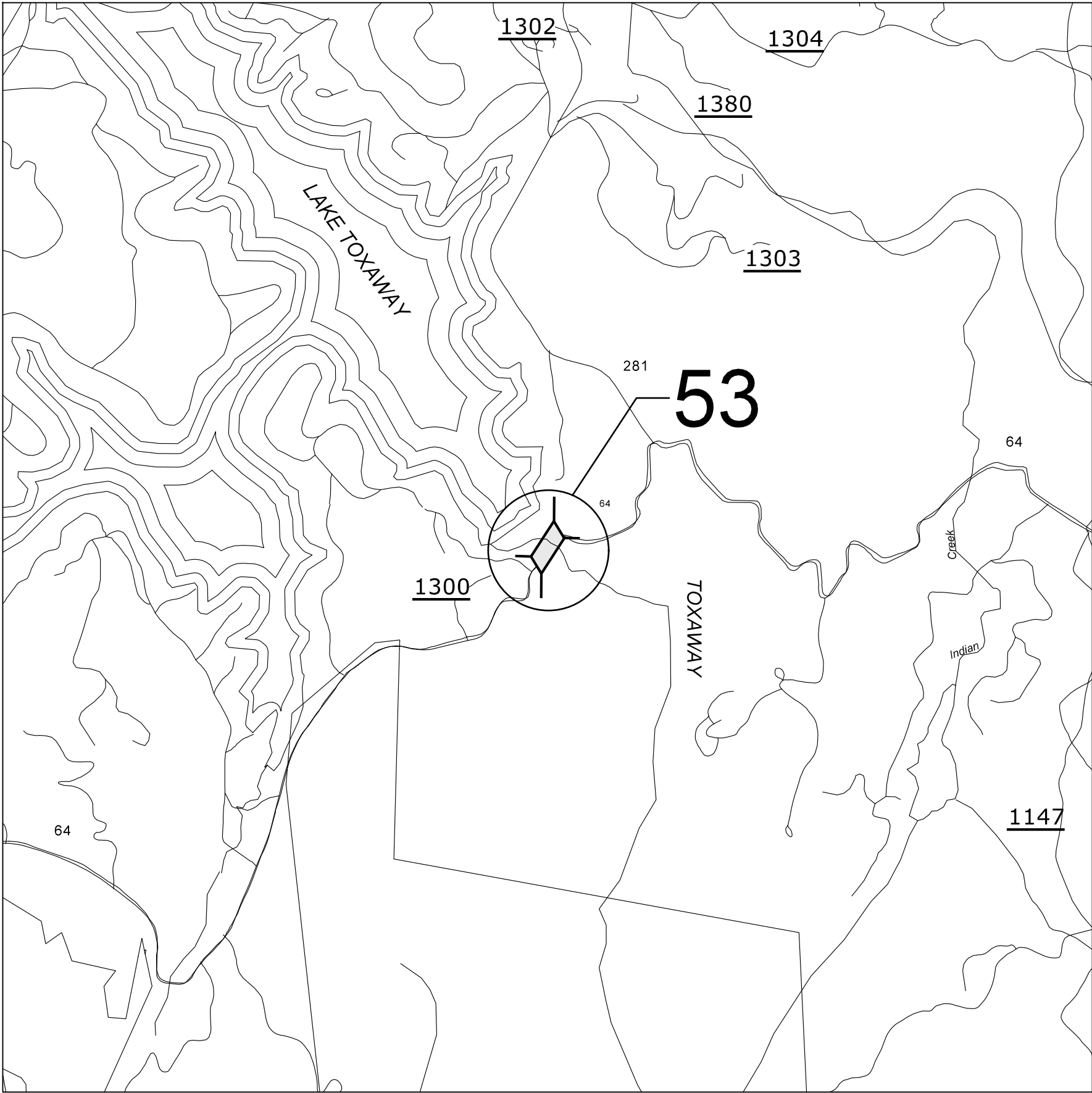
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-139

TRANSYLVANIA COUNTY

LOCATION: TRANSYLVANIA COUNTY:
BRIDGE #053 ON US64 OVER TOXAWAY RIVER
BRIDGE #069 ON US64 OVER N.FORK FRENCH BROAD RIVER

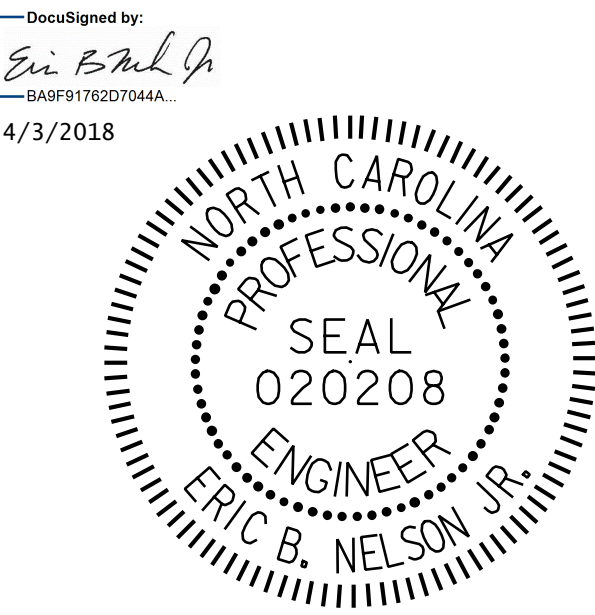
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

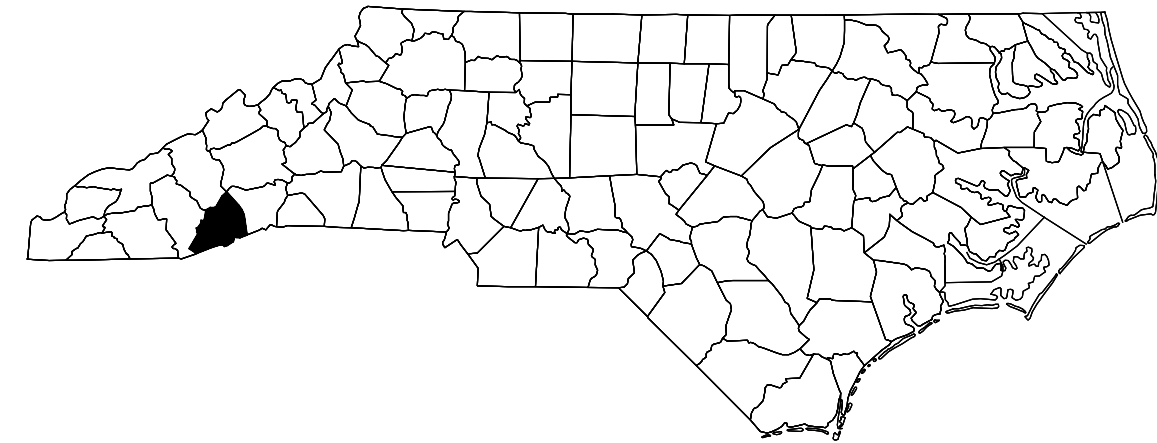


DESIGN DATA
TRANSYLVANIA COUNTY
#053 ADT 2013 = 3,400
#069 ADT 2013 = 5,300

PROJECT LENGTH
TRANSYLVANIA COUNTY
#053 = 0.014 MILE
#069 = 0.036 MILE

PLANS PREPARED BY:
 **Gannett Fleming**
Excellence Delivered **As Promised**
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Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-140

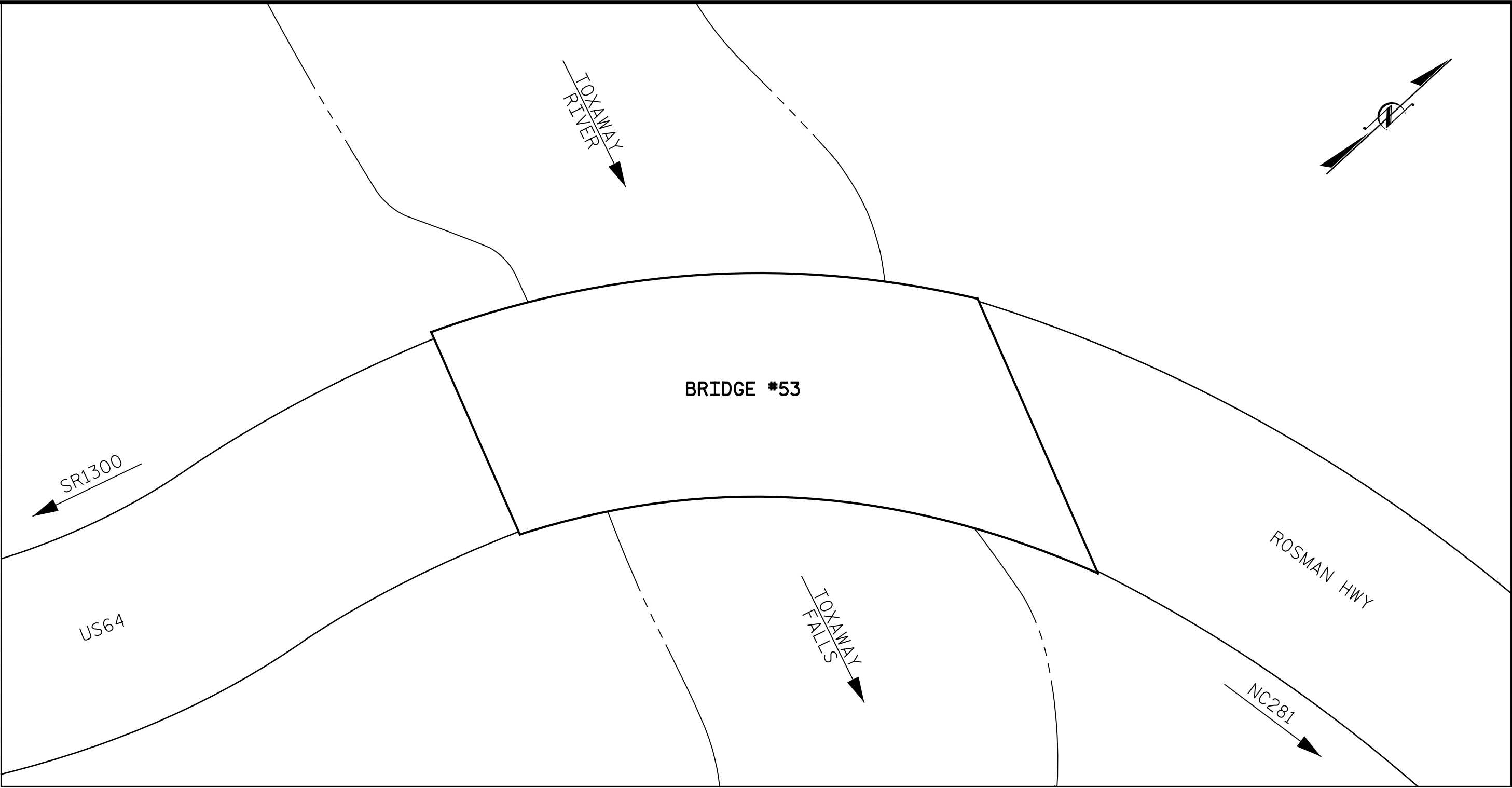
TRANSYLVANIA COUNTY

LOCATION: TRANSYLVANIA COUNTY:
BRIDGE #053 ON US64 OVER TOXAWAY RIVER
BRIDGE #069 ON US64 OVER N.FORK FRENCH BROAD RIVER

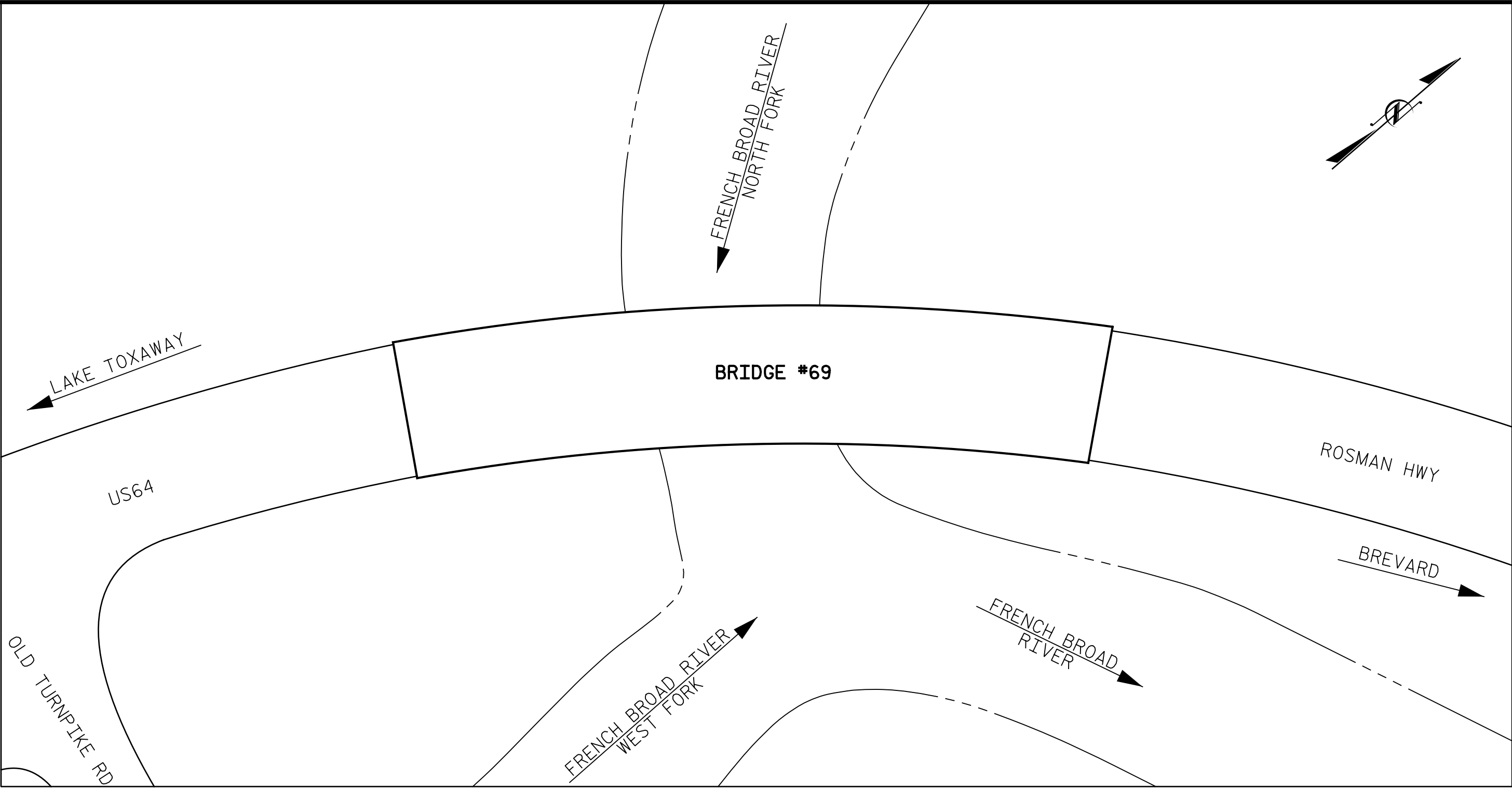
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
S-139	TITLE SHEET
S-140	INDEX OF SHEETS
S-141 THRU S-142	STRUCTURAL PLANS – JOINT REPLACEMENTS



BRIDGE #53



BRIDGE #69

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

BILL OF MATERIAL FOR TRANSYLVANIA COUNTY					
	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION
	LUMP SUM	LN. FT.	CU. FT.	CU. FT.	SQ. FT.
870053	LUMP SUM	100.4	-	23.6	94.4
870069	LUMP SUM	84.8	-	19.6	78.8
TOTAL	LUMP SUM	185.2	-	43.2	173.2

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

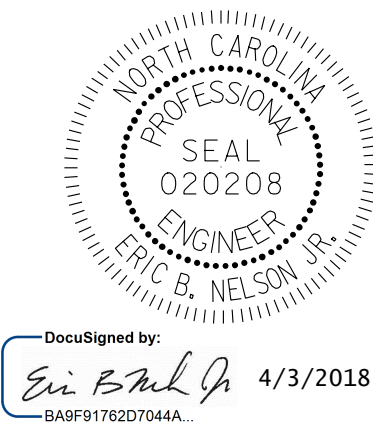
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
TRANSYLVANIA COUNTY



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BILL OF MATERIAL & BRIDGE LOCATION SKETCHES					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-141					TOTAL SHEETS 142

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered As Promised
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

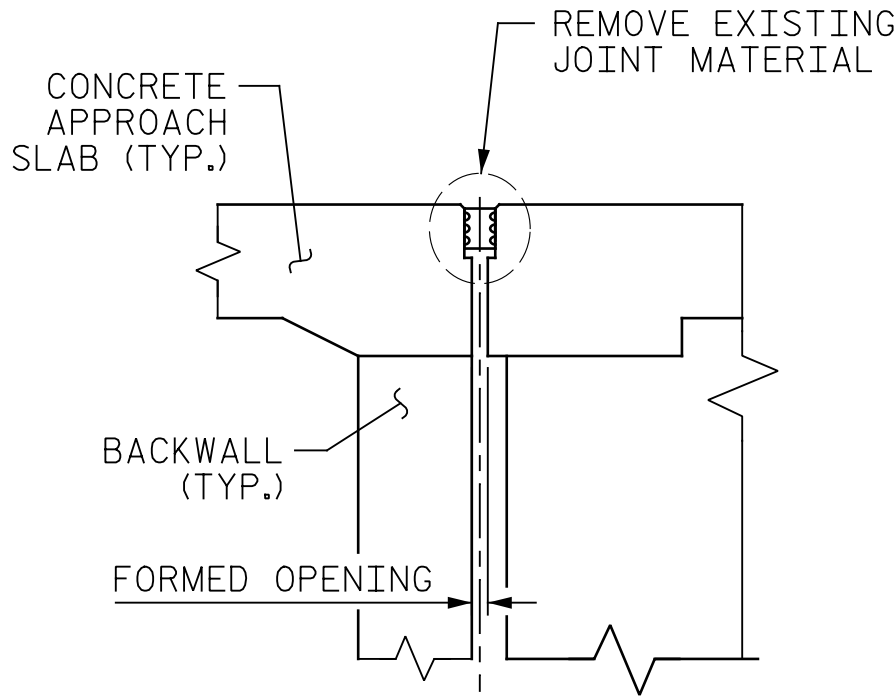
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

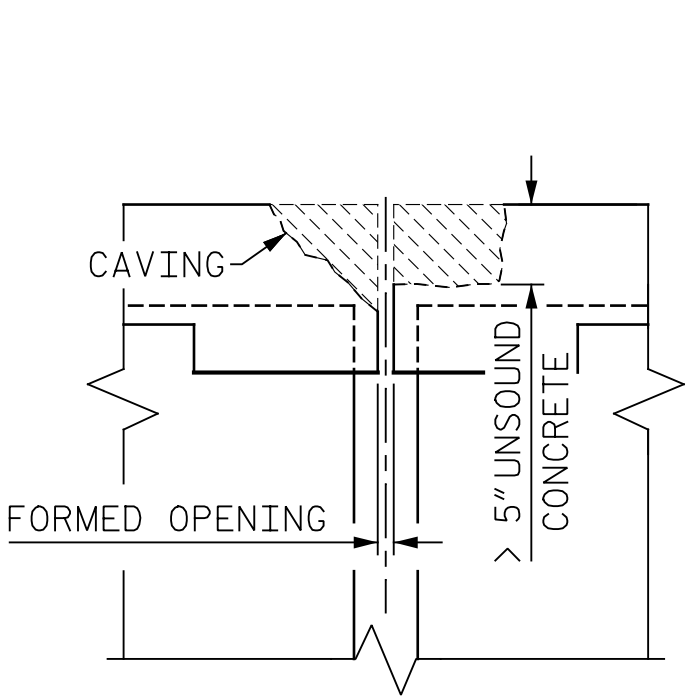
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

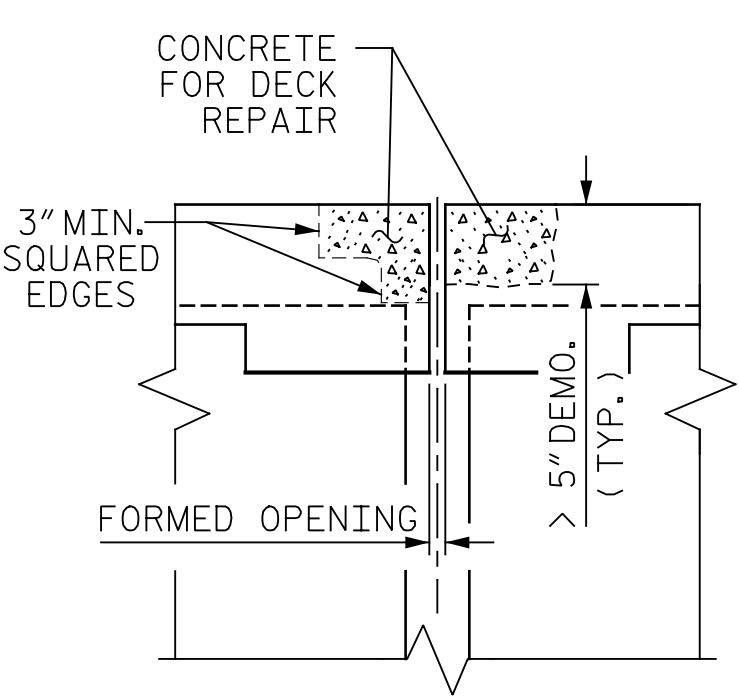
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



EXISTING JOINT
(FOAM SEAL WITH NO HEADER)



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



REPAIRED JOINT

EXISTING JOINT TYPES

CONCRETE FOR DECK REPAIR DETAIL

(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

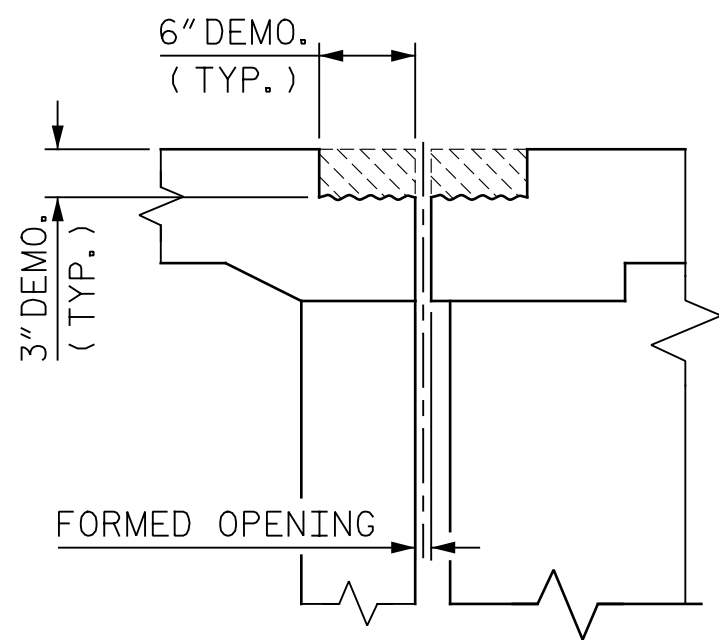
NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

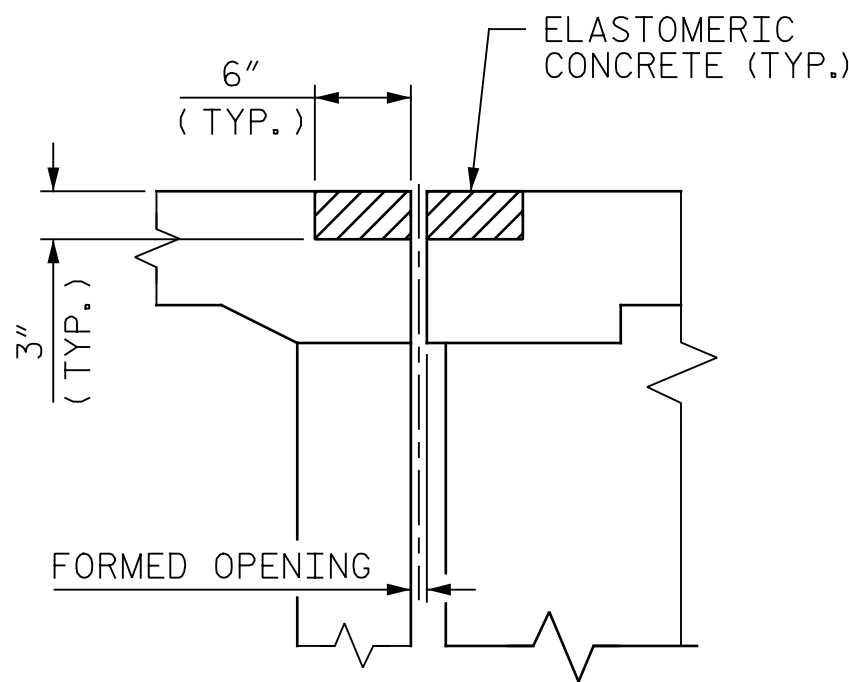
DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

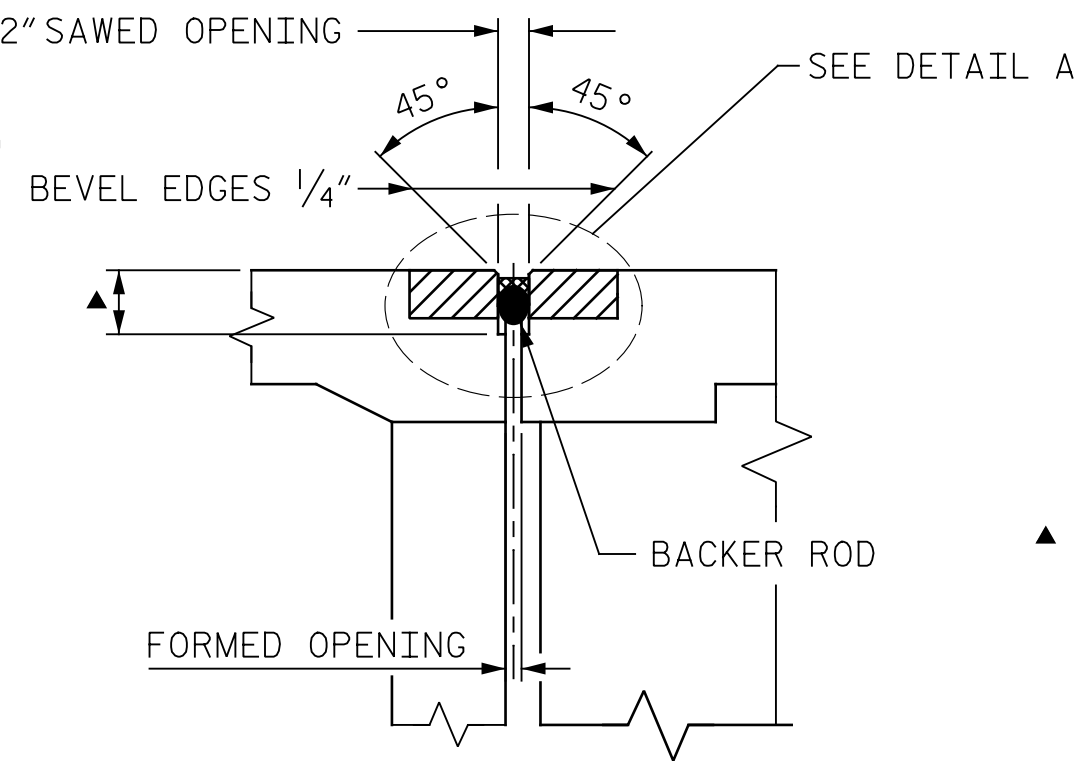
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



MINIMUM
JOINT DEMOLITION



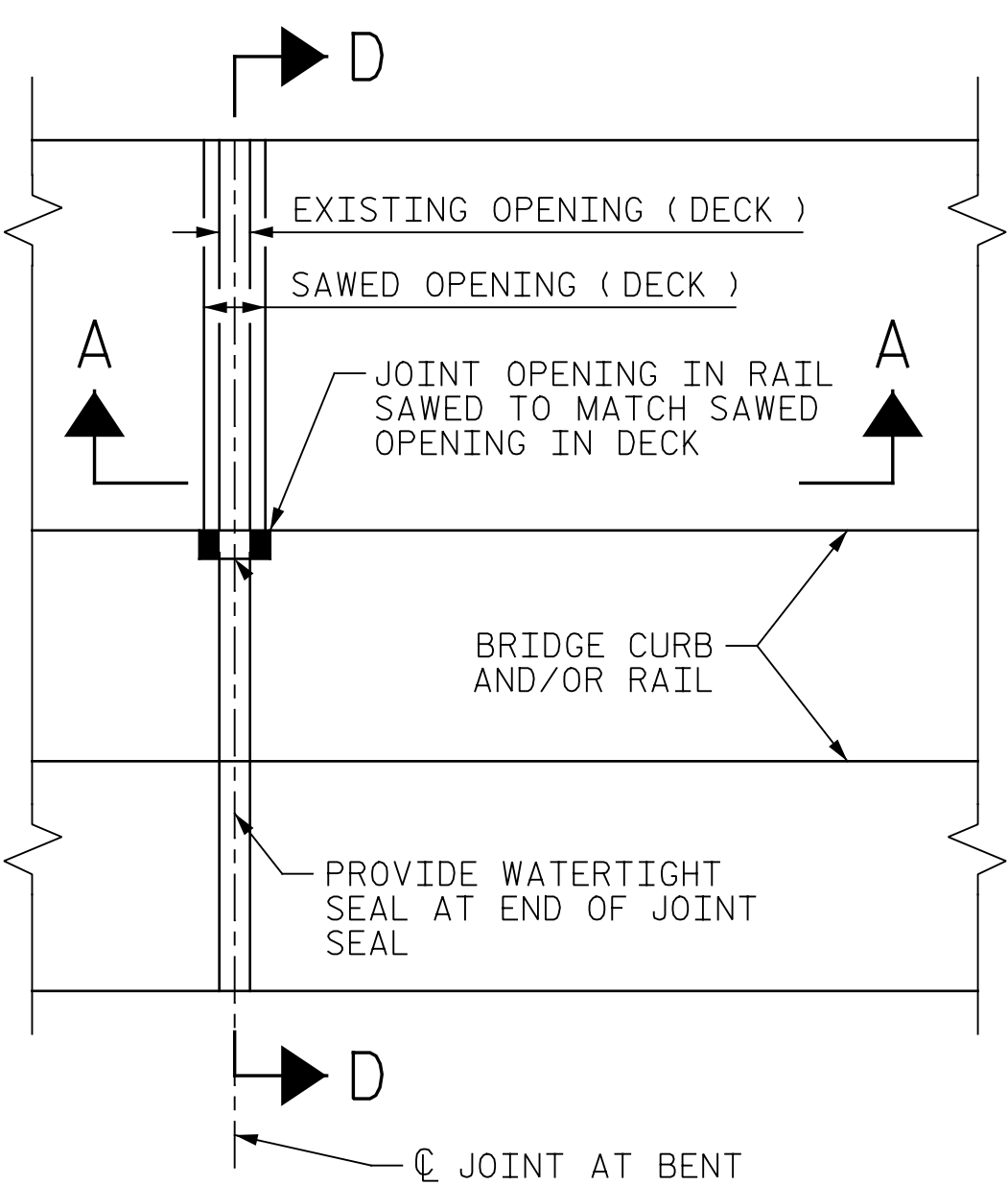
PROPOSED JOINT
PRE-SAWED DIMENSIONS



PROPOSED SILICONE
JOINT SEAL

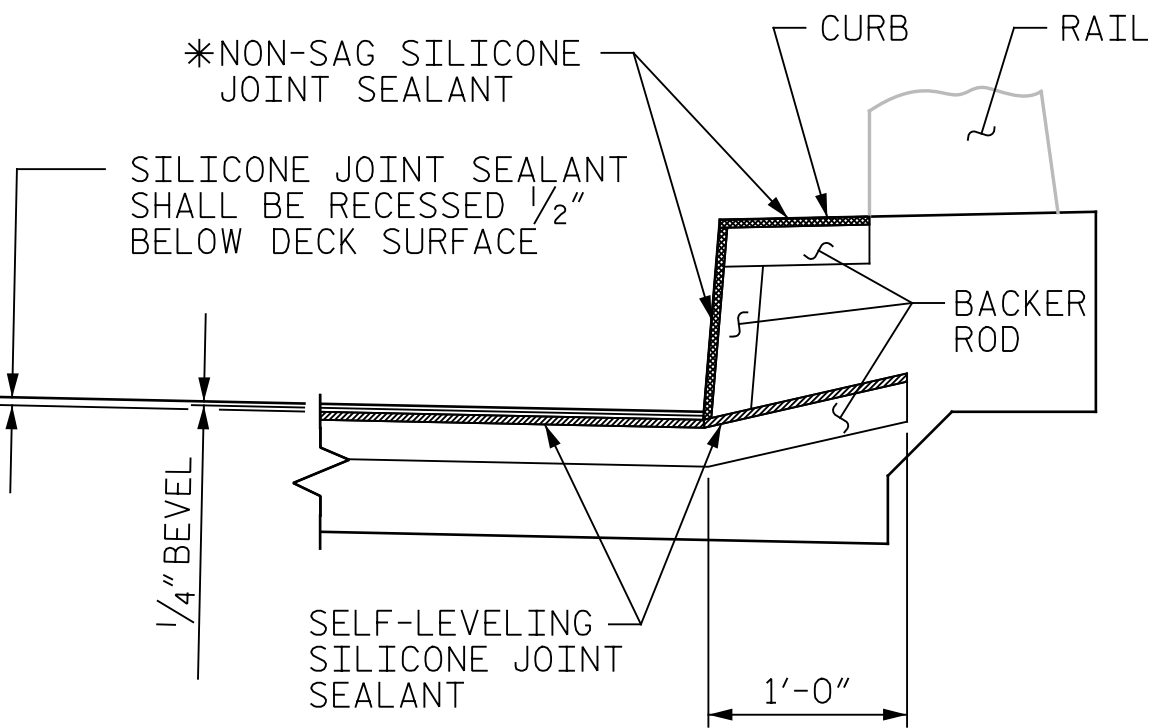
SECTION A-A
PROPOSED JOINT

	SILICONE JOINT SEAL (LF)		ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)				JOINT DEMOLITION (SF)		CONCRETE FOR DECK REPAIR (CF)	
BRIDGE NO.	EB 1	EB 2	EB 1	DIM.	EB 2	DIM.	EB 1	EB 2	EB 1	EB 2
860053	50.2	50.2	11.8	(2) 6"X3"	11.8	(2) 6"X3"	47.2	47.2	-	-
860069	42.4	42.4	9.8	(2) 6"X3"	9.8	(2) 6"X3"	39.4	39.4	-	-



PLAN

*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
TRANSYLVANIA COUNTY
BRIDGE NO. 53, 69



DocuSigned by:
Eric B. Nelson
04/03/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

REVISIONS						SHEET NO. S-142
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	- - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	- - - - -	SEE PLANS
IMPACT ALLOWANCE	- - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	- -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	- - - - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER. DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS. WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8"Ø SHEAR STUDS FOR THE 3/4"Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8"Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4"Ø STUDS BASED ON THE RATIO OF 3 - 7/8"Ø STUDS FOR 4 - 3/4"Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0". EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED. WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB. METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN